
Appendix E – Targeted Contaminated Land Assessment



Billabong Creek Regulators

Landfill gas investigation

NSW Department of Climate Change, Energy, the
Environment and Water

28 May 2025

→ The Power of Commitment



Your ref: 19-823
Our ref: 12537654

26 May 2025

Matt Barden
NSW Department of Climate Change, Energy, the Environment and Water
4 Parramatta Square
12 Darcy Street
Paramatta, NSW, 2150

Billabong Creek Regulators

Dear Matt

1. Introduction

New South Wales Department of Climate Change, Energy, the Environment and Water (NSW DCCEEW) is proposing to replace two existing weirs along Billabong Creek with new regulators (the proposal). To support this proposal, construction of a flood bypass channel is planned at Wanganella Creek, to be referred to as the Wanganella Flood Bypass Channel (a component of the Wanganella Regulator project).

The Wanganella Flood Bypass Channel would enable flood waters to drain between the billabongs in the Wanganella Reserve during flood events. The channel would be around 85 metres long, 40 metres wide and 1.7 metres deep at the deepest point. Once completed the channel sides and base would be natural and vegetated with a local native grass species.

The proposed bypass channel footprint (the site) is located approximately 100 m north-northeast of the Wanganella Landfill (the Landfill). A Preliminary Site Investigation (PSI) was prepared to accompany the Environmental Impact Statement (EIS) for the proposal, which was provided as Appendix T to the EIS (GHD 2024). An extract from the PSI showing the site identification details is provided in Table 1. The location of Wanganella Regulator is also shown on Figure 1 and Figure 2.

The PSI (GHD 2024) did not include intrusive investigations and as such the potential for contamination to be present at the landfill could not be ruled out.

Table 1 Site identification summary

Information	Details
Site address	Wanganella regulator: off Zara Road, Wanganella NSW 2170 Lot DP1024203/7004
Size of study area	92 ha for the Wanganella regulator area. The proposal footprint occupies a small portion of this area.
Local Government Area	Edward River Council – amalgamation of former Conargo Shire Council and Deniliquin Council in 2016
Land Use Zoning	The land zoning within the study area under the Conargo Local Environmental Plan 2013 (Conargo LEP) include: – RU1 – Primary Production – RU5 – Village (north-eastern corner of Wanganella regulator study area).
Traditional landowners	Wamba Wamba and Perrepa Perrepa

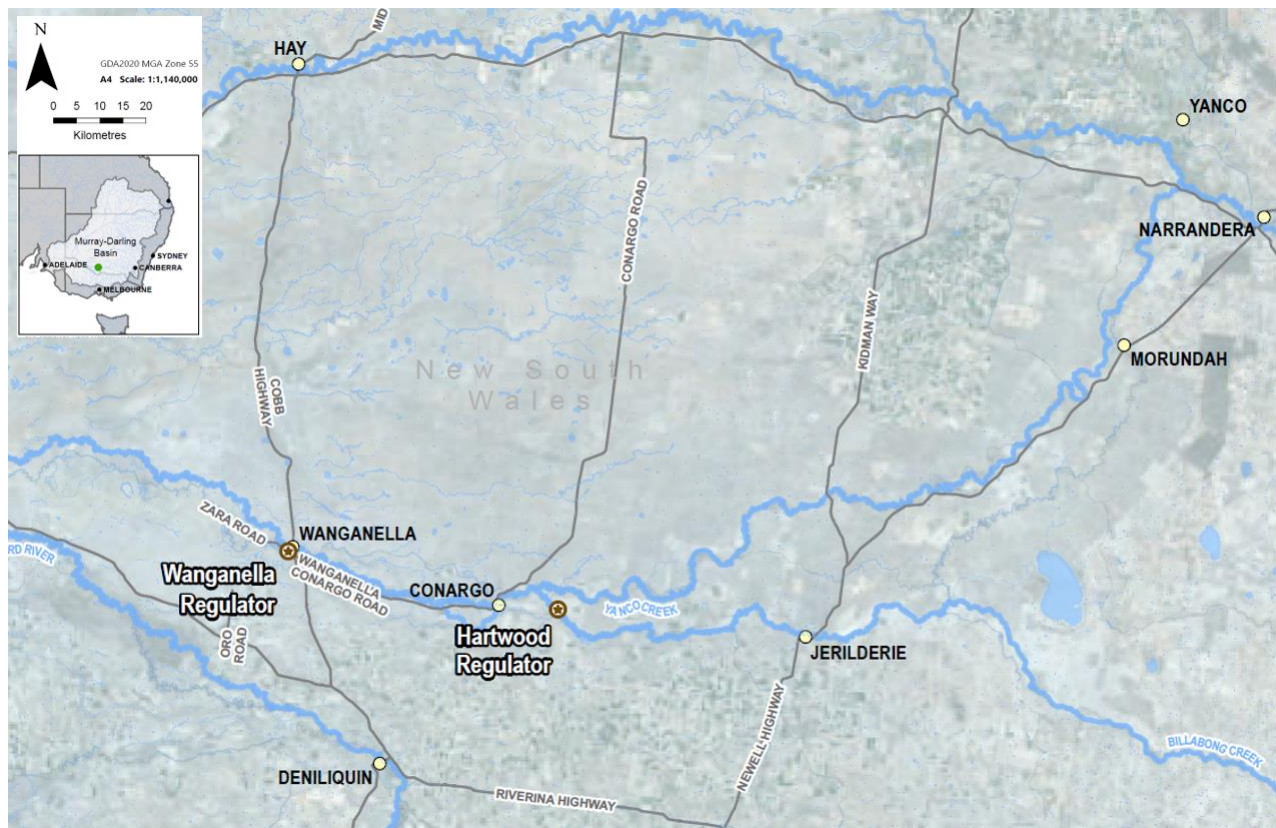


Figure 1 Proposal location

As part of the EIS submission process, NSW Environmental Protection Authority has required NSW DCCEEW to undertake a contamination assessment regarding the risk of underground gas and contaminants impacting the construction of the Wanganella Flood Bypass Channel from the nearby Wanganella Landfill site.

To respond to the requirements of the NSW EPA, a targeted preliminary soil sampling and landfill gas assessment was undertaken. In April 2025 GHD installed six landfill gas monitoring bores (LFG bores) within the proposed contractor activity zone (investigation area) as shown in Figure 2. Preliminary soil sampling was undertaken and field observations were made during the bore installation to investigate the potential for impact from the landfill. Landfill gas monitoring was undertaken at each bore one week following installation. The details of the investigation are provided in this report.

1.1 Purpose of this report

The purpose of this report is to present the findings of the targeted preliminary soil sampling and landfill gas monitoring at the site to respond to NSW EPA requirements to support the EIS submission.

1.2 Objectives

The objectives of the investigation were to undertake targeted preliminary soil sampling and landfill gas monitoring at the site within the Wanganella bypass contractor activity zone.

The purpose of this report is to assess risk to construction workers including direct soil exposure and soil vapour risk during the flood bypass channel works. For completeness however, results have also been assessed for risks to the public and ecological receptors described below.

1.3 Legislative context

This section summarises the legislation, guidelines and/or policies driving the approach to the assessment. This contamination assessment has been completed with consideration of guidelines made or endorsed by the NSW EPA under Section 105 of the Contaminated Land Management Act, 1997. These guidelines include the following key documents:

- Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (NSW EPA, 2020)
- National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 2013).
- Sampling Design Guidelines for Contaminated Land (NSW EPA, 2022)
- Assessment and Management of Hazardous Ground Gases, Contaminated Land Guidelines (NSW EPA, 2022)
- PFAS National Environmental Management Plan (National Chemicals Working Group of the Heads of EPA Australia and New Zealand, 2025)

1.4 Scope and limitations

The 3Rivers Joint Venture (3Rivers), a joint venture between Jacobs Group (Australia) Pty Limited and GHD Pty Ltd has been engaged to provide certain Engineering and Approvals Services for the NSW Sustainable Diversion Limit Adjustment Mechanism (SDLAM) program in accordance with the Agreement between 3Rivers and the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) (the client).

This report has been prepared by GHD for the client, and may only be used and relied on by the client for the purpose agreed between 3Rivers and the client as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than the client arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section 1.6 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.

This report should be read in conjunction with the Preliminary Site Investigation submitted as Appendix T to the Environmental Impact Statement (GHD 2024).

1.5 Scope of work

The following scope of work was undertaken:

- Installation of six landfill gas monitoring bores to 4 m depth
- Soil sampling and logging of six landfill gas monitoring bores
- Gas monitoring of six landfill gas monitoring bores using a GA5000 gas analyser
- Laboratory analysis of soil samples for potential contaminants of concern
- Results analysis and preparation of a factual report (this report) summarising the findings of the preliminary investigations.

1.6 Assumptions

The following assumptions were made in the investigation and reporting:

- Conditions at the time of sampling and monitoring were representative of typical conditions at the site, based on the desktop review and PSI (GHD 2024).
- This assessment comprised a preliminary, targeted investigation and does not constitute a detailed site investigation

2. Site overview

2.1 Wanganella Landfill

The Wanganella Rural Landfill is located approximately 600 m west of Cobb Highway. Billabong Creek arches around the landfill from Cobb Highway to the east, to approximately 500 m south of the landfill and back up toward the landfill reaching less than 100 m west of the western landfill boundary. The site location and features are shown in Figure 3 and summarised in section 2.2.

The PSI (GHD 2024) included a review of aerial imagery which indicated that landfilling may have commenced between 1950 and 1964.

According to Ramjo Murray Waste Group, the landfill currently accepts bricks, concrete, garden waste, general household waste, oil, steel and tyres¹. According to Edward River council, Wanganella Landfill is available to the local community only, and keys can be collected from Customer Service Centre² for waste disposal.

During the site work, the landfill was observed to be fully fenced with two sections:

¹ Ramjo Murray Waste Group. Website accessed 12/05/2025. <https://www.murraywaste.nsw.gov.au/edward-river-council/>

² Edward River Council. Website accessed 12/05/2025. <https://www.edwardriver.nsw.gov.au/Services/Rubbish-Bins-and-Recycling/Landfills-and-Transfer-Stations>

- A level area containing loose rubbish piles within the site including oil drums/barrels, building material waste and tyres.
- An area of uneven ground including pits and mounds.

What appeared to be a former sand quarry pit and levy bank is located immediately east of the landfill, separated from the landfill by a dirt road.

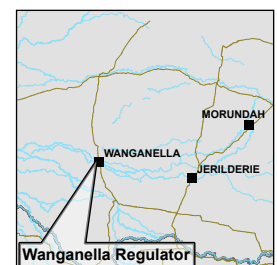
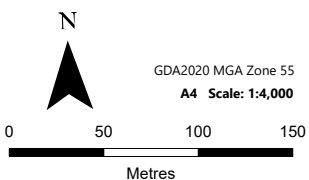
2.2 Environmental setting

The PSI (GHD 2024) included a review of the environmental setting at the site. Some key features are summarised below:

- The topography through the study area is relatively uniform/flat at approximately 90 m AHD.
- Geological units reported at the site include Quaternary alluvial channel deposits and Tertiary and Quaternary alluvial floodplain deposits consisting of clastic sediment and silt respectively.
- Surface water features within 1.5 km of the site include perennial streams of the Murray River catchment (Billabong Creek, Forest Anabranche), tributaries of Billabong Creek, some farm dams surrounding the investigation area, multiple areas of standing water within the natural environment near rivers and creeks in low lying areas.
- The investigation area is situated within the Lower Murray Alluvial and Lower Mudgee Alluvial: Shallow management areas. There are no licensed groundwater entitlements within the investigation area.
- Two groundwater boreholes were identified within a 2.0 kilometre radius of the study area for irrigation purposes. Groundwater was encountered between 19.3 metres below ground level (mbgl) and 28 mbgl. The groundwater regionally is likely to be deep within the geology, however, there is likely to be shallow perched groundwater present within the residual soils near the creek lines.



- Landfill gas borehole locations
- Wanganella Landfill
- Contractor activity zone
- Clearing area
- Landfill Boundary**
 - Active area
 - Assumed to be disused
- Water bodies
- Roads



Landfill gas bore investigation locations



Produced by 3Rivers for the SDLAM Program.
 3Rivers does not warrant that this document is definitive
 nor free of errors and does not accept liability for any loss
 caused or arising from reliance upon
 information provided herein

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, Maxar, 15/05/2023 5:54 PM update
 HighResLightAU/Sydney/Project/2112517654/GIS/Maps/Deliverables/SDLAM_Variant12517654_RP/5062_Billingong_EIR_Construction.dwg

3. Investigation levels

The relevant investigation levels are presented in Table 2 for the receptors identified below. Further information on receptors can be found in the PSI (GHD 2024).

The site is within Primary Production zone and is currently used for intermittent stock grazing by a neighbouring landholder. Nearby land features include the Wanganella Cemetery approximately 800 m northwest, Billabong Creek and the landfill. Potential receptors at the site include:

- Construction and maintenance workers associated with the flood bypass channel
- Potential members of the public and users of the landfill
- Wildlife associated with Billabong Creek
- Livestock.

Table 2 Investigation levels

Receptor	Criteria
Human	NEPM 2013 HIL-D NEPM (2013) Table 1A(1) Health Investigation Level (HIL) for Commercial/Industrial Land Use (HIL- D) NEPM 2013 HIL-C¹ NEPM (2013) Table 1A(1) Health Investigation Level (HIL) for Recreational Land Use (HIL-C) NEPM 2013 HSL-D NEPM (2013) Table 1A(3) Health Screening Level (HSL) (vapour) for Commercial/Industrial Land Use (HSL-D) NEPM Management Limits NEPM (2013) Table 1B(6) Management Limits for TPH Fractions F1-F4 for Residential, Parkland and Public Open Space, Coarse and Fine Soil CRC Care 2011 Soil Direct Contact HSL-D Commercial/Industrial CRC Care (2011) Table 4 Soil Direct Contact HSL-D Commercial/Industrial CRC Care 2011 Soil HSL Vapour Intrusion CRC Care (2011) Table 3 Soil HSL Vapour Intrusion, 0 to <2m, Sand
Ecological	NEPM 2013 EIL 80%² Ecological Investigation Level (EIL) terrestrial ecosystems for public open space (80% protection) NEPM 2013 EIL 99%² Ecological Investigation Level (EIL) areas of ecological significance (99% protection)
¹The HIL-C relates to developed public infrastructure (e.g., sports grounds, parks and playgrounds) and does not include undeveloped public open space which should be subject to a site-specific assessment where appropriate. The HIL-C has been used as a screening level in this assessment, noting that it may not directly apply to the site. ²Generic EILs have been applied	

4. Methodology

Targeted bore locations and depths were selected within the proposed contractor activity zone and excavation depths with consideration to the preliminary conceptual site model (CSM) developed in the PSI (GHD 2024). The bore locations are shown in Figure 3.

The bore installation and sampling methodology and the analytical schedule is outlined below.

4.1 Bore installation and monitoring

The field methodology is outlined in Table 3.

Table 3 Field methodology

Step	Method
Service clearance	All LFG bore locations were in an area which had been previously assessed for presence of underground services by Jacobs, with none present in the work area. GHD also reviewed the service plans for the area supplied by Before You Dig Australia.
Bore advancement	LFG bores were advanced using a solid flight auger to 4 metres below ground level (mbgl) to target likely construction excavation depth and installed in accordance with <i>Assessment and Management of Hazardous Ground Gases, Contaminated Land Guidelines</i> (NSW EPA, 2022).
Soil logging	Each soil bore was logged for soil classifications and descriptions in reference with AS1726-2017 (Standards Australia 2017) and AS4482.1-2005 (Standards Australia 2005) ³ guidelines. Colour changes, odours and the occurrence of fill or waste (if present) were noted on each soil bore log. Soil descriptions for the lithology encountered during drilling are presented in the bore logs provided in Attachment 2.
Sample collection	A photo-ionisation detector (PID) was used to screen samples for the presence of volatile organic carbons (VOCs). Soil was sampled and placed in zip lock bags before the PID was inserted into the bag to screen for VOCs. Calibration records were provided by the supplier and are presented in Attachment 4. Representative samples were placed into laboratory prepared glass sample jars, with Teflon lined lids. Soil samples were collected directly from the auger using new disposable nitrile gloves for each sample and then placed directly into laboratory provided sample jars. Three samples were collected per borehole. Soil samples were typically collected from 0.5 m, 1.5 m and 2.5 or 3.5 m depths.
Sample transportation	Once collected and labelled, the samples were immediately placed in ice chests and chilled with ice for transport to the nominated National Association of Testing Authorities (NATA) accredited laboratories with accompanying chain of custody documentation. For this assessment, Australian Laboratory Services (ALS) was the primary laboratory, and Eurofins was the secondary laboratory.
Bore installation	Monitoring bore construction comprised a 50 mm diameter Poly-vinyl Chloride (PVC) casing with a screen from 1.5 - 4 m depth comprising 3 mm slots. The screened section was backfilled with 10/16 mm gravel filter pack, which was filled to approximately 1.3 m depth and isolated with a bentonite seal to 0.2 m below the surface. Wells were fitted with above ground monument covers and secured into position with concrete filling the remaining void to the ground surface. A gas well cap was installed to seal the PVC opening.
Equilibration	All LFG bores were left for one week prior to LFG monitoring to allow ground gases to equilibrate within the wells in accordance with <i>Assessment and Management of Hazardous Ground Gases, Contaminated Land Guidelines</i> (NSW EPA, 2022).

³ This standard has been withdrawn, but has been referred to in the absence of a similar standard

Step	Method
Gas monitoring	A calibrated GA5000 gas analyser (calibration certificate provided in Attachment 4) was used to record gas concentrations within each LFG bore. Prior to measuring gas concentrations pressure and flow rate readings were also taken for each bore. The GA5000 tubing was purged of potential remnant gases or water and pressure and flow rates were 'zeroed' before each reading in accordance with <i>Assessment and Management of Hazardous Ground Gases, Contaminated Land Guidelines</i> (NSW EPA, 2022)..
Quality assurance and quality control	Intra-laboratory (blind) field duplicate and inter-laboratory (split) field duplicate samples were collected at a frequency of at least 5% of primary samples. An equipment rinsate sample was collected off the drill rig auger to assess for potential cross-contamination and trip blank samples were submitted at a rate of one per sample batch to assess for contamination during transport.

4.2 Analytical program

The analytical program for soil sampling and ground gas monitoring is presented in Table 4.

Table 4 Analytical program

Potential contaminants of concern (PCoC)	Sample media	# of samples to be analysed	QA/QC duplicates samples	Total # of samples
Total recoverable hydrocarbons (TRH) /benzene, toluene, ethylene, naphthalene and xylene (BTEXN) / polycyclic aromatic hydrocarbons (PAH) / 8 heavy metals / organochlorine and organophosphate pesticides (OCP / OPP) / polychlorinated biphenyls (PCB) / Per- and polyfluoroalkyl substances (PFAS) (30 analytes / asbestos (presence/absence)	Soil	18	2	20
Methane (CH ₄), carbon dioxide (CO ₂), oxygen (O ₂), hydrogen sulfide (H ₂ S) and carbon monoxide (CO).	Ground gas	6	N/A	6 field readings
QA/QC: Trip spikes / blanks (BTEX) – minimum of one spike and bank per shipment of samples sent to laboratory				2
QA/QC: Rinsate (metals, TRH, PFAS) – minimum of one rinsate per day, collected from sampling equipment				1

5. Results

5.1 Field observations

Site and surrounds

There was widespread evidence of earthworks at the investigation area and surrounds as shown in the photolog (Attachment 1). The site was noted to be level and appeared to have been cleared of vegetation historically due to the absence of mature trees within the work area compared to nearby vegetation. Depressions were present to the east and west of the site, with what appeared to be a levy bank which ran along the dirt road east of the landfill.

Within the landfill itself, the northern portion consisted of trenches and mounds in what appeared to be a random distribution. There was no mound which resembled a typical landfill cell. The southern portion of the landfill appeared to be acting as a transfer station, however signs were observed which referred to the use of dumping pits.

With the exception of rubbish within the landfill boundary and some broken glass on the ground surface near the vicinity of BH08, no evidence of contamination was identified at the investigation area or surrounds.

Lithology

The soil profile was relatively consistent between each borehole, as summarised in Table 5 and in the photolog in Attachment 1. Further detail is provided in the bore logs in Attachment 2. During the drilling program, no visual or olfactory signs of anthropogenic material or contamination were observed in the boreholes.

Table 5: Lithological profile summary

Unit	Depth (m)	PID range (ppm)	Lithological description
Unit 1	0.0 – 0.5	0.0 – 0.3	Fill/ reworked natural: CLAY: Brown with some yellow mottling, low plasticity, stiff, dry, some to trace fine to medium sand. No landfill waste was identified
Unit 2	0.5 – 4.0	0.0 – 0.7	Natural: SAND: Yellow transitioning to orange-brown from 3 m, dry, loose, fine to medium with coarse grains observed from 3m. No landfill waste was identified

5.2 Soil sampling

Soil results are tabulated in Attachment 3. No exceedances of the investigation levels were identified. In summary, the results indicated the following:

- No asbestos was identified in the analysed samples
- Results of BTEXN, PAH and TRH analytes were not detected greater than the laboratory limit of reporting (LOR).
- PFAS was not detected above the LOR.
- Metals were generally below all investigation levels. Nickel and zinc exceeded the conservative 99% protection levels with ranges of 4-21 mg/kg and 9-32 mg/kg respectively.
- Pesticides and PCBs were not detected above the LOR.

5.3 Ground gas monitoring

Results of ground gas monitoring are summarised in Table 6 and detailed in Attachment 3.

Table 6 Gas monitoring results

Location ID	Peak methane concentration (ppm)	Peak CO ₂ concentration (% v/v)	Minimum O ₂ (% v/v)	Stabilised CO (% v/v)	Stabilised H ₂ S (ppm)
BH07	0.0	2.4	18.0	0.0	1
BH08	0.0	0.8	19.0	0.0	1
BH09	0.0	1.2	18.9	0.0	0.0
BH10	0.0	1.5	19.1	0.0	0.0
BH11	0.0	0.6	19.8	0.0	0.0
BH12	0.0	0.9	19.5	0.0	0.0

6. Summary

The results of the targeted preliminary soil sampling and ground gas monitoring are summarised below:

- No landfill waste was observed in the six boreholes during drilling.
- Soil analytical results were below the adopted investigation levels with the exception of the ecological investigation level for 99% species protection for nickel and zinc.
- Field ground gas measurements reported the following ranges in gas concentrations:
 - Peak methane levels of 0.0 ppm
 - Peak carbon dioxide levels of 0.6-2.4 % v/v
 - Minimum oxygen levels of 18.0-19.8 % v/v
 - Stabilised carbon monoxide levels of 0.0 % v/v
 - Stabilised hydrogen sulfide levels of 0.0-1 ppm

Based on these results, the construction of the flood bypass channel would be very unlikely to pose any risks to workers or the general public from contamination.

7. References

GHD (2024) *Billabong Creek Regulators, Contamination Assessment*. File Name DE19-823-YCM2-DE-EN-RPT-0009-BillSubs_LFG September 2024

CRC CARE (2011) *Technical Report No. 10 Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater*.

National Environment Protection Council (1999) *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)*, National Environment Protection Council, April 2013.

New South Wales Environment Protection Authority (2020). *Assessment and Management of Hazardous Ground Gases, Contaminated Land Guidelines*. Amended May 2020.

Regards

Level 15, 133 Castlereagh Street
Sydney, NSW 2000
www.ghd.com
www.ghd.com <http://www.ghd.com/>



Meg Turner
Environmental Scientist
+61 3 8687 8862
meg.turner@ghd.com

Attachments

Attachment 1

Photolog

Reference	Location	Description	Photolog
1.	Bypass channel site	The site is relatively flat and cleared	

Reference	Location	Description	Photolog
2.	Levy bank	What appears to be a levy bank runs north-south east of the LFG boreholes. Photograph looking south toward the landfill.	

Reference	Location	Description	Photolog
3.	Disused portion of landfill	Looking into the landfill from the eastern fenceline.	

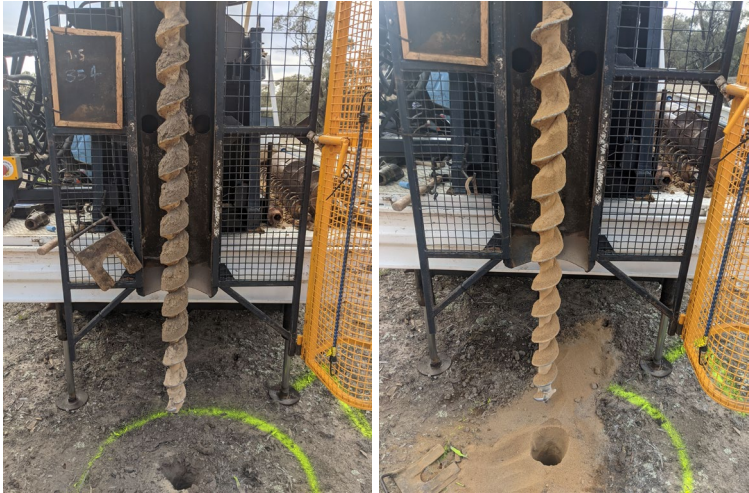
Reference	Location	Description	Photolog
4.	Disused portion of landfill	Looking into the landfill from the eastern fenceline toward the operational site in the south.	

Reference	Location	Description	Photolog
5.	Access road and borrow pit		

Reference	Location	Description	Photolog
6.	Landfill entrance	Entrance to the landfill	

Reference	Location	Description	Photolog
7.	Landfill	Landfill waste	

Reference	Location	Description	Photolog
8.	Completed bores	Showing all bores on completion, looking northwest from the southeast corner.	

Reference	Location	Description	Photolog
9.	BH07	Showing the soil on the auger from 0-1 m on the left and 3-4 m on the right	
10.	BH08	Showing the soil on the auger from 0-1 m on the left and 3-4 m on the right	

Reference	Location	Description	Photolog
11.	BH09	Showing the soil on the auger from 0-1 m on the left and 3-4 m on the right	
12.	BH10	Showing the soil on the auger from 0.5 m on the left to 1.5 m on the right	

Reference	Location	Description	Photolog
13.	BH11	Showing the soil on the auger from 0-1 m on the left and 3-4 m on the right	
14.	BH12	Showing the soil on the auger from 0-0.5 m on the left to 4 m on the right	

Attachment 2

Borelogs



BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL BH07

Page 1 of 1

Client 3Rivers Joint Venture	Drill Co. GTS	Easting, Northing 144.808995,-35.210586
Project 3Rivers - NSW SDLAM Engineering Services	Driller	Grid Ref GDA2020_MGA_zone_54
Project No. 12537654	Rig Type Ute-mounted SFA	Elevation
Site Wanganella	Drill Method Solid Flight Auger	TOC mAHD -
Location Wanganella Tip	Total Depth (m) 4.00	Logged By MT
Date Drilled 29/04/2025 -	Casing Diameter (mm) 50	Checked By

B.C.L No. N/A		Casing 50 mm PVC		Screen Slotted PVC, 10/16 gravel pack		Surface Completion Monument					
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation (m)
0.5	SFA	0	BH07_0.5		Concrete		Clayey SILT; Brown (FILL) CLAY; Brown with yellow inclusions, low plasticity, fine to medium, trace sand (NATURAL)	D D	ST ST	No odour, no staining, no waste	-0.5
1				Bentonite							-1
1.5		0.1	BH07_1.5				SAND; Yellow-brown with dark brown inclusions, fine to medium (NATURAL)	D	L		-1.5
2											-2
2.5											-2.5
3		0	BH07_3.0		Gravel Pack		As above, orange-brown	D	L		-3
3.5											-3.5
4							Termination Depth at: 4.00 m				-4
4.5											-4.5
5											-5
5.5											-5.5
6											-6
6.5											-6.5
7											-7
7.5											-7.5
8											-8
8.5											-8.5
9											-9
9.5											-9.5

Notes This log is not intended for geotechnical purposes. Hollow triangle symbolises water strike, solid triangle symbolises recovered water level.			
Drilling Abbreviations AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, MR-Mud Rotary, NDD-Non Destructive Drilling, PT-Pushtube, RB-Rotary Blade, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler		Moisture Abbreviations D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	
Consistency Abbreviations Granular Soils VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense, VD - Very Dense		Cohesive Soils VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard	



BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL BH08

Page 1 of 1

Client 3Rivers Joint Venture Project 3Rivers - NSW SDLAM Engineering Services Project No. 12537654 Site Wanganella Location Wanganella Tip Date Drilled 29/04/2025 -				Drill Co. GTS Driller Rig Type Ute-mounted SFA Drill Method Solid Flight Auger Total Depth (m) 4.00 Casing Diameter (mm) 50				Easting, Northing 144.809227,-35.210648 Grid Ref GDA2020_MGA_zone_54 Elevation TOC mAHD - Logged By MT Checked By							
B.C.L No. N/A				Casing 50 mm PVC				Screen Slotted PVC, 10/16 gravel pack				Surface Completion Monument			
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.			Elevation (m)		
0.5	SFA	0.3	BH08_0.5		Concrete		FILL CLAY; Dark brown, low plasticity, some fine to medium sand (NATURAL)	D	ST	No odour no staining, no waste			-0.5		
1					Bentonite								-1		
1.5		0.7	BH08_1.5				SAND; Yellow-brown, fine to medium, black intrusion (NATURAL)	D	L	No odour one dark staining, no waste			-1.5		
2													-2		
2.5												-2.5			
3		0.1	BH08_3.0		Gravel Pack		As above without black intrusion, with grey-orange sand	D	L	No odour no staining, no waste			-3		
3.5												-3.5			
4							Termination Depth at: 4.00 m						-4		
4.5													-4.5		
5													-5		
5.5													-5.5		
6													-6		
6.5													-6.5		
7													-7		
7.5													-7.5		
8													-8		
8.5													-8.5		
9													-9		
9.5													-9.5		
Notes This log is not intended for geotechnical purposes. Hollow triangle symbolises water strike, solid triangle symbolises recovered water level.															
Drilling Abbreviations AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, MR-Mud Rotary, NDD-Non Destructive Drilling, PT-Pushtube, RB-Rotary Blade, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler							Moisture Abbreviations D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated			Consistency Abbreviations Granular Soils VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense, VD - Very Dense Cohesive Soils VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard					



BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL BH09

Page 1 of 1

Client 3Rivers Joint Venture	Drill Co. GTS	Easting, Northing
Project 3Rivers - NSW SDLAM Engineering Services	Driller	144.809445,-35.210732
Project No. 12537654	Rig Type Ute-mounted SFA	Grid Ref GDA2020_MGA_zone_54
Site Wanganella	Drill Method Solid Flight Auger	Elevation
Location Wanganella Tip	Total Depth (m) 4.00	TOC mAHD -
Date Drilled 29/04/2025 -	Casing Diameter (mm) 50	Logged By MT
		Checked By

B.C.L No. N/A		Casing 50 mm PVC		Screen Slotted PVC, 10/16 gravel pack		Surface Completion Monument					
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation (m)
0.5	SFA	0.1	BH09_0.5		Concrete		FILL	D	L	No odour, no staining, no waste	-0.5
1				Bentonite	CLAY; Dark brown with grey and yellow mottling, low plasticity, trace fine to medium sand (NATURAL)		D	ST	-1		
1.5		0	BH09_1.5			Transition: SAND, yellow, fine to medium (NATURAL)	D	L	-1.5		
2											-2
2.5											-2.5
3		0	BH09_3.0		Gravel Pack		SAND; Orange-brown, fine to coarse (NATURAL)	D	L		-3
3.5							grey inclusion	D	L		-3.5
4							Termination Depth at: 4.00 m. Backfill with 10/16 gravel to 1.5m, bentonite to 0.2m and concrete seal , monument.				-4
4.5											-4.5
5											-5
5.5											-5.5
6											-6
6.5											-6.5
7											-7
7.5											-7.5
8											-8
8.5											-8.5
9											-9
9.5											-9.5

Notes			
This log is not intended for geotechnical purposes. Hollow triangle symbolises water strike, solid triangle symbolises recovered water level.			
Drilling Abbreviations		Moisture Abbreviations	Consistency Abbreviations
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, MR-Mud Rotary, NDD-Non Destructive Drilling, PT-Pushtube, RB-Rotary Blade, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler		D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	Granular Soils VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense, VD - Very Dense Cohesive Soils VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard



BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL BH10

Page 1 of 1

Client 3Rivers Joint Venture	Drill Co. GTS	Easting, Northing 144.808874,-35.21082
Project 3Rivers - NSW SDLAM Engineering Services	Driller	Grid Ref GDA2020_MGA_zone_54
Project No. 12537654	Rig Type Ute-mounted SFA	Elevation
Site Wanganella	Drill Method Solid Flight Auger	TOC mAHD -
Location Wanganella Tip	Total Depth (m) 4.00	Logged By MT
Date Drilled 29/04/2025 -	Casing Diameter (mm) 50	Checked By

B.C.L No. N/A		Casing 50 mm PVC		Screen Slotted PVC, 10/16 gravel pack		Surface Completion Monument						
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation (m)	
0.5	SFA	0	BH10_0.5		Concrete		FILL CLAY; Brown, low plasticity, with fine to coarse sand (NATURAL)	D D	L ST	No odour, no staining, no waste	-0.5	
1					Bentonite		SAND; Yellow-brown, fine to medium (NATURAL)	D	L		-1	
1.5											-1.5	
2		0	BH10_2.0					SAND; Orange-brown, fine to coarse (NATURAL)	D		L	-2
2.5											-2.5	
3					Gravel Pack						-3	
3.5		0	BH10_3.5				SAND; Orange-brown with grey mottling, fine to coarse	D	L		-3.5	
4							Termination Depth at: 4.00 m. Backfill with 10/16 gravel to 1.5m, bentonite to 0.2m and concrete seal at surface.				-4	
4.5											-4.5	
5											-5	
5.5											-5.5	
6											-6	
6.5											-6.5	
7											-7	
7.5											-7.5	
8											-8	
8.5											-8.5	
9											-9	
9.5											-9.5	

Notes This log is not intended for geotechnical purposes. Hollow triangle symbolises water strike, solid triangle symbolises recovered water level.			
Drilling Abbreviations AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, MR-Mud Rotary, NDD-Non Destructive Drilling, PT-Pushtube, RB-Rotary Blade, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler		Moisture Abbreviations D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	
Consistency Abbreviations Granular Soils VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense, VD - Very Dense		Cohesive Soils VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard	



BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL BH11

Page 1 of 1

Client 3Rivers Joint Venture	Drill Co. GTS	Easting, Northing 144.809006,-35.210909
Project 3Rivers - NSW SDLAM Engineering Services	Driller	Grid Ref GDA2020_MGA_zone_54
Project No. 12537654	Rig Type Ute-mounted SFA	Elevation
Site Wanganella	Drill Method Solid Flight Auger	TOC mAHD -
Location Wanganella Tip	Total Depth (m) 4.00	Logged By MT
Date Drilled 29/04/2025 -	Casing Diameter (mm) 50	Checked By

B.C.L No. N/A		Casing 50 mm PVC		Screen Slotted PVC, 10/16 gravel pack		Surface Completion Monument					
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation (m)
0.5	SFA	0	BH11_0.5		Concrete		FILL CLAY; Brown, low plasticity, with fine to medium sand (NATURAL)	D	ST	No odour, no staining, no waste	-0.5
1					Bentonite		Transition: SAND, fine to medium, yellow-brown (NATURAL)	D	L		-1
1.5		0	BH11_1.5 Dup-01 Split-01				SAND; Orange-brown, fine to coarse, slightly moist (NATURAL)	SM	L		-1.5
2											-2
2.5											-2.5
3		0	BH11_3.0		Gravel Pack		Dry (NATURAL)	D	L		-3
3.5											-3.5
4							Termination Depth at: 4.00 m. 10/16 Gravel pack to 1.5m, bentonite to 0.2m and concrete seal to surface.				-4
4.5											-4.5
5											-5
5.5											-5.5
6											-6
6.5											-6.5
7											-7
7.5											-7.5
8											-8
8.5											-8.5
9											-9
9.5											-9.5

Notes This log is not intended for geotechnical purposes. Hollow triangle symbolises water strike, solid triangle symbolises recovered water level.			
Drilling Abbreviations AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, MR-Mud Rotary, NDD-Non Destructive Drilling, PT-Pushtube, RB-Rotary Blade, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler		Moisture Abbreviations D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	Consistency Abbreviations Granular Soils VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense, VD - Very Dense Cohesive Soils VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard



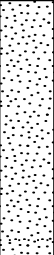
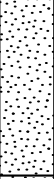
BOREHOLE LOG

ENVIRONMENTAL-GROUNDWATER

MONITORING WELL BH12

Page 1 of 1

Client 3Rivers Joint Venture	Drill Co. GTS	Easting, Northing 144.809154,-35.211031
Project 3Rivers - NSW SDLAM Engineering Services	Driller	Grid Ref GDA2020_MGA_zone_54
Project No. 12537654	Rig Type Ute-mounted SFA	Elevation
Site Wanganella	Drill Method Solid Flight Auger	TOC mAHD -
Location Wanganella Tip	Total Depth (m) 4.00	Logged By MT
Date Drilled 28/04/2025 -	Casing Diameter (mm) 50	Checked By

B.C.L No.		N/A		Casing		50 mm PVC		Screen		Slotted PVC, 10/16 gravel pack		Surface Completion		Monument	
Depth (m)	Drilling Method	PID (ppm)	Sample ID	Water	Well Details	Graphic Log	LITHOLOGICAL DESCRIPTION Soil Type (Classification Group Symbol); Particle Size; Colour; Secondary / Minor Components.	Moisture	Consistency	COMMENTS/ CONTAMINANT INDICATORS Odours, staining, waste materials, separate phase liquids, imported fill, ash.	Elevation (m)				
0.5	SFA	0	BH12_0.5		Concrete		FILL CLAY: Brown, low plasticity, stiff, dry, with fine to medium sand (NATURAL)	D	ST	No odour, no staining, no waste	-0.5				
1				Bentonite		SAND: Yellow-brown, fine to medium (NATURAL)	D	L	-1						
1.5		0	BH12_1.5								-1.5				
2											-2				
2.5		0.1	BH12_2.5				As above, some coarse sand (NATURAL)	D	L		-2.5				
3					Gravel Pack						-3				
3.5											-3.5				
4	0						Termination Depth at: 4.00 m. Screen to 1.5m, bento plug to 0.2m, concrete to surface with monument cover. No sign of water table.				-4				
4.5											-4.5				
5											-5				
5.5											-5.5				
6											-6				
6.5											-6.5				
7											-7				
7.5											-7.5				
8											-8				
8.5											-8.5				
9											-9				
9.5											-9.5				

Notes			
This log is not intended for geotechnical purposes. Hollow triangle symbolises water strike, solid triangle symbolises recovered water level.			
Drilling Abbreviations		Moisture Abbreviations	Consistency Abbreviations
AH-Air Hammer, AR-Air Rotary, BE-Bucket Excavation, CC-Concrete Coring, DC-Diamond Core, FH-Foam Hammer, HA-Hand Auger, HE-Hand Excavation (shovel), HFA-Hollow Flight Auger, MR-Mud Rotary, NDD-Non Destructive Drilling, PT-Pushtube, RB-Rotary Blade, SD-Sonic Drilling, SFA-Solid Flight Auger, SS-Split Spoon, WB-Wash Bore, WS-Window Sampler		D-Dry, SM-Slightly Moist, M-Moist, VM-Very Moist, W-Wet, S-Saturated	Granular Soils VL-Very Loose, L-Loose, MD-Medium Dense, D-Dense, VD - Very Dense Cohesive Soils VS-Very Soft, S-Soft, F-Firm, ST-Stiff, VST-Very Stiff, H-Hard

Attachment 3

Result tables



Attachment 3
Table 1
Soil Results

	Inorganics		Asbestos																	
	% Moisture_	Moisture (%)	Asbestos Fibres (g)	Asbestos (Trace)	Asbestos Type	weight of sample	APPROVED IDENTIFIER:	Organic Fibre	Synthetic Mineral Fibre	Asbestos from ACM in Soil	ACM - Comment	Asbestos from FA & AF in Soil	AF - Comment	FA- Comment	Approximate Sample Mass	ACM Mass	Mass AF	Mass Asbestos in ACM	Friable Asbestos (FA & AF) - Mass	
Unit	%	%	g	Fibres	-	g	-	g/kg	g/kg	%	-	%	-	-	g	g	g	g	g	
LOR	1	1	0.1			0.01														
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																				
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																				
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(1) HIL D Comm/Ind																				
NEPM 2013 Table 1A(1) HIL C Rec																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report																			
BH07	30 Apr 2025	BH07_0.5	0.5	EM2507390	-	14.8	0 ^{#1}	0 ^{#1}	1 ^{#2}	372	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	30 Apr 2025	BH07_1.5	1.5	EM2507390	-	7.6	0 ^{#1}	0 ^{#1}	1 ^{#2}	498	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	30 Apr 2025	BH07_3.0	3	EM2507390	-	1.5	0 ^{#1}	0 ^{#1}	1 ^{#2}	585	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
BH08	29 Apr 2025	BH08_0.5	0.5	EM2507390	-	12.3	0 ^{#1}	0 ^{#1}	1 ^{#2}	293	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH08_1.5	1.5	EM2507390	-	1.8	0 ^{#1}	0 ^{#1}	1 ^{#2}	628	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH08_3.0	3	EM2507390	-	1.4	0 ^{#1}	0 ^{#1}	1 ^{#2}	654	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
BH09	29 Apr 2025	BH09_0.5	0.5	EM2507390	-	11.4	0 ^{#1}	0 ^{#1}	1 ^{#2}	286	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH09_1.5	1.5	EM2507390	-	1.0	0 ^{#1}	0 ^{#1}	1 ^{#2}	370	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH09_3.0	3	EM2507390	-	<1.0	0 ^{#1}	0 ^{#1}	1 ^{#2}	473	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	Dup-02	-	EM2507390	-	1.8	0 ^{#1}	0 ^{#1}	1 ^{#2}	492	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	Split-02	-	1215277	1.3	-	-	-	-	-	-	-	-	0.0000	1 ^{#8}	0.0000	1 ^{#8}	1 ^{#8}	60	0.0000	0.0000	0.0000	0.0000
BH10	29 Apr 2025	BH10_0.5	0.5	EM2507390	-	14.2	0 ^{#1}	0 ^{#1}	1 ^{#2}	410	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH10_2.0	2	EM2507390	-	1.2	0 ^{#1}	0 ^{#1}	1 ^{#2}	506	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH10_3.5	3.5	EM2507390	-	1.2	0 ^{#1}	0 ^{#1}	1 ^{#2}	405	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
BH11	29 Apr 2025	BH11_0.5	0.5	EM2507390	-	10.2	0 ^{#1}	0 ^{#1}	1 ^{#2}	334	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH11_1.5	1.5	EM2507390	-	<1.0	0 ^{#1}	0 ^{#1}	1 ^{#2}	402	1 ^{#3}	1 ^{#13}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	BH11_3.0	3	EM2507390	-	3.2	0 ^{#1}	0 ^{#1}	1 ^{#2}	421	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	Dup-01	-	EM2507390	-	1.3	0 ^{#1}	0 ^{#1}	1 ^{#2}	420	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	29 Apr 2025	Split-01	-	1215277	11	-	-	-	-	-	-	-	-	0.0000	1 ^{#8}	0.0000	1 ^{#8}	1 ^{#8}	341	0.0000	0.0000	0.0000	0.0000
BH12	28 Apr 2025	BH12_0.5	0.5	EM2507390	-	10.3	0 ^{#1}	0 ^{#1}	1 ^{#2}	287	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	28 Apr 2025	BH12_1.5	1.5	EM2507390	-	<1.0	0 ^{#1}	0 ^{#1}	1 ^{#2}	395	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-
	28 Apr 2025	BH12_2.5	2.5	EM2507390	-	1.2	0 ^{#1}	0 ^{#1}	1 ^{#2}	460	1 ^{#3}	0 ^{#1}	0 ^{#1}	-	-	-	-	-	-	-	-	-	-



Attachment 3
Table 1
Soil Results

	Inorganics		Asbestos																	
	% Moisture =	Moisture (%)	Asbestos Fibres (g)	Asbestos (Trace)	Asbestos Type	weight of sample	APPROVED IDENTIFIER:	Organic Fibre	Synthetic Mineral Fibre	Asbestos from ACM in Soil	ACM - Comment	Asbestos from FA & AF in Soil	AF - Comment	FA- Comment	Approximate Sample Mass	ACM Mass	Mass AF	Mass Asbestos in ACM		
Unit	%	%	g	Fibres	-	g	-	g/kg	g/kg	%	-	%	-	-	g	g	g	g	g	
LOR	1	1	0.1			0.01														
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																				
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																				
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(1) HIL D Comm/Ind																				
NEPM 2013 Table 1A(1) HIL C Rec																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report															
Statistics																			
Number of Results		2	20	20	20	20	20	20	20	20	2	2	2	2	2	2	2	2	2
Number of Detects		2	17	20	20	20	20	20	20	2	2	2	2	2	2	2	2	2	2
Minimum Concentration		1.3	1	0	0	1	286	1	0	0	0	1	0	1	1	60	0	0	0
Minimum Detect		1.3	1	0	0	1	286	1	0	0	0	1	0	1	1	60	0	0	0
Maximum Concentration		11	14.8	0	0	1	654	1	1	0	0	1	0	1	1	341	0	0	0
Maximum Detect		11	14.8	0	0	1	654	1	1	0	0	1	0	1	1	341	0	0	0
Average Concentration *		6.2	4.9	0	0	1	435	1	0.05	0	0	1	0	1	1	200	0	0	0
Geometric Average *		3.8	2.6	0	0	1	423	1	0	0	0	1	0	1	1	143	0	0	0
Median Concentration *		6.15	1.65	0	0	1	415	1	0	0	0	1	0	1	1	200.5	0	0	0
Standard Deviation *		6.9	5.2	0	0	0	105	0	0.22	0	0	0	0	0	0	199	0	0	0
Geometric Standard Deviation *		4.5	3.3			1	1.3	1				1		1	1	3.4			
95% UCL (Student's-t) *		36.77	6.916	0	0	1	475.1	1	0.136	0	0	1	0	1	1	1,088	0	0	0
Number of Env Standard Exceedances		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Detects		100	85	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
% of Non-Detects		0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Detects at or above Env Standards		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Results Below Env Standards or Non-Detect		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

	Inorganics		Asbestos																	Friable Asbestos (FA & AF) - Mass
	% Moisture_	Moisture (%)	Asbestos Fibres (g)	Asbestos (Trace)	Asbestos Type	weight of sample	APPROVED IDENTIFIER:	Organic Fibre	Synthetic Mineral Fibre	Asbestos from ACM in Soil	ACM - Comment	Asbestos from FA & AF in Soil	AF - Comment	FA- Comment	Approximate Sample Mass	ACM Mass	Mass AF	Mass Asbestos in ACM		
Unit	%	%	g	Fibres	-	g	-	g/kg	g/kg	%	-	%	-	-	g	g	g	g	g	
LOR	1	1	0.1			0.01														
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																				
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																				
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(1) HIL D Comm/Ind																				
NEPM 2013 Table 1A(1) HIL C Rec																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report
-----------	------	----------	-------	------------

- Comments
- #1 No
 - #2 -
 - #3 M. TRAN
 - #4 Grey clay like soil.
 - #5 Grey tan clay like soil.
 - #6 Tan sandy soil.
 - #7 Beige sandy soil.
 - #8 Nil
 - #9 Organic fibres detected.
 - #10 No trace asbestos detected.
 - #11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.
 - #12 Grey beige clay like soil.
 - #13 Yes
 - #14 Grey soil with organic matter.



Attachment 3
Table 1
Soil Results

Asbestos													Metals						
	Mass Asbestos in FA	Mass asbestos in AF	Mass FA	Organic Fibres - Comment	Respirable Fibres - Comment	Asbestos Reported Result	Description	Synthetic Fibres - Comment	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc			
Unit	g	g	g	-	-	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
LOR									2	0.4	2	5	5	0.1	2	5			
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m									40			20	470		5	15			
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m									100		190	60	1,100		30	70			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind									3,000	900	3,600	240,000	1,500	730	6,000	400,000			
NEPM 2013 Table 1A(1) HIL C Rec									300	90	300	17,000	600	80	1,200	30,000			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report																
BH07	30 Apr 2025	BH07 0.5	0.5	EM2507390	-	-	-	-	-	-	1 ^{#4}	-	<5	<1	24	17	13	<0.1	18	32
	30 Apr 2025	BH07 1.5	1.5	EM2507390	-	-	-	-	-	-	1 ^{#5}	-	<5	<1	16	6	8	<0.1	7	18
	30 Apr 2025	BH07 3.0	3	EM2507390	-	-	-	-	-	-	1 ^{#6}	-	<5	<1	7	<5	<5	<0.1	7	10
BH08	29 Apr 2025	BH08 0.5	0.5	EM2507390	-	-	-	-	-	-	1 ^{#4}	-	<5	<1	24	15	13	<0.1	19	28
	29 Apr 2025	BH08 1.5	1.5	EM2507390	-	-	-	-	-	-	1 ^{#7}	-	<5	<1	7	<5	<5	<0.1	11	12
	29 Apr 2025	BH08 3.0	3	EM2507390	-	-	-	-	-	-	1 ^{#6}	-	<5	<1	8	<5	<5	<0.1	9	11
BH09	29 Apr 2025	BH09 0.5	0.5	EM2507390	-	-	-	-	-	-	1 ^{#4}	-	<5	<1	22	14	13	<0.1	14	27
	29 Apr 2025	BH09 1.5	1.5	EM2507390	-	-	-	-	-	-	1 ^{#7}	-	<5	<1	6	<5	<5	<0.1	4	9
	29 Apr 2025	BH09 3.0	3	EM2507390	-	-	-	-	-	-	1 ^{#6}	-	<5	<1	6	<5	<5	<0.1	8	10
	29 Apr 2025	Dup-02	-	EM2507390	-	-	-	-	-	-	1 ^{#4}	-	<5	<1	8	6	<5	<0.1	11	14
BH10	29 Apr 2025	Split-02	-	1215277	0.0000	0.0000	0.0000	1 ^{#9}	1 ^{#10}	1 ^{#11}	-	1 ^{#8}	3.7	<0.4	9.2	6.1	<5	<0.1	10	15
	29 Apr 2025	BH10 0.5	0.5	EM2507390	-	-	-	-	-	-	1 ^{#4}	-	<5	<1	25	15	12	<0.1	21	28
	29 Apr 2025	BH10 2.0	2	EM2507390	-	-	-	-	-	-	1 ^{#6}	-	<5	<1	6	<5	<5	<0.1	7	10
BH11	29 Apr 2025	BH10 3.5	3.5	EM2507390	-	-	-	-	-	-	1 ^{#6}	-	<5	<1	7	<5	<5	<0.1	6	13
	29 Apr 2025	BH11 0.5	0.5	EM2507390	-	-	-	-	-	-	1 ^{#12}	-	<5	<1	21	12	11	<0.1	17	24
	29 Apr 2025	BH11 1.5	1.5	EM2507390	-	-	-	-	-	-	1 ^{#14}	-	<5	<1	7	<5	<5	<0.1	8	12
	29 Apr 2025	BH11 3.0	3	EM2507390	-	-	-	-	-	-	1 ^{#6}	-	<5	<1	8	<5	<5	<0.1	8	14
	29 Apr 2025	Dup-01	-	EM2507390	-	-	-	-	-	-	1 ^{#6}	-	<5	<1	7	<5	<5	<0.1	7	11
BH12	29 Apr 2025	Split-01	-	1215277	0.0000	0.0000	0.0000	1 ^{#9}	1 ^{#10}	1 ^{#11}	-	1 ^{#8}	2.5	<0.4	11	<5	<5	<0.1	7.8	14
	28 Apr 2025	BH12 0.5	0.5	EM2507390	-	-	-	-	-	-	1 ^{#4}	-	<5	<1	20	13	11	<0.1	16	25
	28 Apr 2025	BH12 1.5	1.5	EM2507390	-	-	-	-	-	-	1 ^{#7}	-	<5	<1	6	<5	<5	<0.1	8	11
	28 Apr 2025	BH12 2.5	2.5	EM2507390	-	-	-	-	-	-	1 ^{#7}	-	<5	<1	7	<5	<5	<0.1	9	12



Attachment 3
Table 1
Soil Results

Asbestos										Metals							
	Mass Asbestos in FA	Mass asbestos in AF	Mass FA	Organic Fibres - Comment	Respirable Fibres - Comment	Asbestos Reported Result	Description	Synthetic Fibres - Comment	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	
Unit	g	g	g	-	-	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
LOR									2	0.4	2	5	5	0.1	2	5	
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																	
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																	
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m									40			20	470		5	15	
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m									100		190	60	1,100		30	70	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																	
>=0m, <1m																	
>=1m, <2m																	
>=2m, <4m																	
>=4m																	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																	
>=0m, <1m																	
>=1m, <2m																	
>=2m, <4m																	
>=4m																	
NEPM 2013 Table 1A(1) HIL D Comm/Ind									3,000	900	3,600	240,000	1,500	730	6,000	400,000	
NEPM 2013 Table 1A(1) HIL C Rec									300	90	300	17,000	600	80	1,200	30,000	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																	

Loc. Code	Date	Field ID	Depth	Lab Report
Statistics				
Number of Results	2	2	2	2
Number of Detects	2	2	2	2
Minimum Concentration	0	0	0	1
Minimum Detect	0	0	0	1
Maximum Concentration	0	0	0	1
Maximum Detect	0	0	0	1
Average Concentration *	0	0	0	1
Geometric Average *	0	0	0	1
Median Concentration *	0	0	0	1
Standard Deviation *	0	0	0	0
Geometric Standard Deviation *	0	0	0	1
95% UCL (Student's-t) *	0	0	0	1
Number of Env Standard Exceedances	0	0	0	0
Number of Env Standard Exceedances (Detects Only)	0	0	0	0
% of Detects	100	100	100	100
% of Non-Detects	0	0	0	0
% of Detects at or above Env Standards	0	0	0	0
% of Results Below Env Standards or Non-Detect	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

	Asbestos								Metals							
	Mass Asbestos in FA	Mass asbestos in AF	Mass FA	Organic Fibres - Comment	Respirable Fibres - Comment	Asbestos Reported Result	Description	Synthetic Fibres - Comment	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
Unit	g	g	g	-	-	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR									2	0.4	2	5	5	0.1	2	5
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m									40			20	470		5	15
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m									100		190	60	1,100		30	70
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																
>=0m, <1m																
>=1m, <2m																
>=2m, <4m																
>=4m																
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																
>=0m, <1m																
>=1m, <2m																
>=2m, <4m																
>=4m																
NEPM 2013 Table 1A(1) HIL D Comm/Ind									3,000	900	3,600	240,000	1,500	730	6,000	400,000
NEPM 2013 Table 1A(1) HIL C Rec									300	90	300	17,000	600	80	1,200	30,000
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																

Loc. Code	Date	Field ID	Depth	Lab Report

Comments

#1 No

#2 -

#3 M. TRAN

#4 Grey clay like soil.

#5 Grey tan clay like soil.

#6 Tan sandy soil.

#7 Beige sandy soil.

#8 Nil

#9 Organic fibres detected.

#10 No trace asbestos detected.

#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.

#12 Grey beige clay like soil.

#13 Yes

#14 Grey soil with organic matter.



Attachment 3
Table 1
Soil Results

Unit	BTEXN								TRH - NEPM 2013						
	Naphthalene (value used in F2 calc)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)
LOR	mg/kg 0.5	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.2	mg/kg 0.3	mg/kg 0.2	mg/kg 10	mg/kg 10	mg/kg 50	mg/kg 50	mg/kg 100	mg/kg 100	mg/kg 50
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial		430	99,000	27,000			81,000		26,000		20,000		27,000	38,000	
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand		77	NL	NL			NL		NL		NL				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m															
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay															
>=0m, <1m		4	NL	NL			NL		310		NL				
>=1m, <2m		6	NL	NL			NL		480		NL				
>=2m, <4m		9	NL	NL			NL				NL				
>=4m		20	NL	NL			NL		NL		NL				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand															
>=0m, <1m		3	NL	NL			230		260		NL				
>=1m, <2m		3	NL	NL			NL		370		NL				
>=2m, <4m		3	NL	NL			NL		630		NL				
>=4m		3	NL	NL			NL		NL		NL				
NEPM 2013 Table 1A(1) HIL D Comm/Ind															
NEPM 2013 Table 1A(1) HIL C Rec															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil										700		1,000	2,500	10,000	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil										800		1,000	3,500	10,000	

Loc. Code	Date	Field ID	Depth	Lab Report															
BH07	30 Apr 2025	BH07_0.5	0.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	30 Apr 2025	BH07_1.5	1.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	30 Apr 2025	BH07_3.0	3	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
BH08	29 Apr 2025	BH08_0.5	0.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH08_1.5	1.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH08_3.0	3	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
BH09	29 Apr 2025	BH09_0.5	0.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH09_1.5	1.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH09_3.0	3	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	Dup-02	-	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
BH10	29 Apr 2025	Split-02	-	1215277	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	<100
	29 Apr 2025	BH10_0.5	0.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH10_2.0	2	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH10_3.5	3.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
BH11	29 Apr 2025	BH11_0.5	0.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH11_1.5	1.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	BH11_3.0	3	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	Dup-01	-	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	29 Apr 2025	Split-01	-	1215277	<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	-	<20	<20	<50	<50	<100	<100	<100
BH12	28 Apr 2025	BH12_0.5	0.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	28 Apr 2025	BH12_1.5	1.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50
	28 Apr 2025	BH12_2.5	2.5	EM2507390	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50



Attachment 3
Table 1
Soil Results

Unit	BTEXN								TRH - NEPM 2013						
	Naphthalene (value used in F2 calc)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	C10-C40 (Sum of Total)
LOR	0.5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	10	10	50	50	100	100	50
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial		430	99,000	27,000			81,000		26,000		20,000		27,000	38,000	
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand		77	NL	NL			NL		NL		NL				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m															
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay															
>=0m, <1m		4	NL	NL			NL		310		NL				
>=1m, <2m		6	NL	NL			NL		480		NL				
>=2m, <4m		9	NL	NL			NL		NL		NL				
>=4m		20	NL	NL			NL		NL		NL				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand															
>=0m, <1m		3	NL	NL			230		260		NL				
>=1m, <2m		3	NL	NL			NL		370		NL				
>=2m, <4m		3	NL	NL			NL		630		NL				
>=4m		3	NL	NL			NL		NL		NL				
NEPM 2013 Table 1A(1) HIL D Comm/Ind															
NEPM 2013 Table 1A(1) HIL C Rec															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil										700		1,000	2,500	10,000	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil										800		1,000	3,500	10,000	

Loc. Code	Date	Field ID	Depth	Lab Report												
Statistics																
Number of Results					22	22	22	22	22	22	20	22	22	22	22	22
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.5	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<0.2	<10	<10	<50	<50
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<20	<20	<50	<50	<100
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.48	0.095	0.23	0.23	0.23	0.24	0.24	0.1	5.5	5.5	25	27
Geometric Average *					0.47	0.094	0.22	0.22	0.22	0.23	0.24	0.1	5.3	5.3	25	27
Median Concentration *					0.5	0.1	0.25	0.25	0.25	0.25	0.1	5	5	25	50	25
Standard Deviation *					0.074	0.015	0.059	0.059	0.059	0.044	0.029	0	1.5	1.5	0	7.4
Geometric Standard Deviation *					1.2	1.2	1.6	1.6	1.6	1.3	1.2	1	1.2	1.2	1	1.2
95% UCL (Student's-t) *					0.504	0.101	0.253	0.253	0.253	0.252	0.1	5.994	5.994	25	50	29.97
Number of Env Standard Exceedances					0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100
% of Detects at or above Env Standards					0	0	0	0	0	0	0	0	0	0	0	0
% of Results Below Env Standards or Non-Detect					100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

	BTEXN								TRH - NEPM 2013						
	Naphthalene (value used in F2 calc)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.1	0.1	0.1	0.1	0.2	0.3	0.2	10	10	50	50	100	100	50
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial		430	99,000	27,000			81,000		26,000		20,000		27,000	38,000	
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand		77	NL	NL			NL		NL		NL				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m															
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay															
>=0m, <1m		4	NL	NL			NL		310		NL				
>=1m, <2m		6	NL	NL			NL		480		NL				
>=2m, <4m		9	NL	NL			NL		NL		NL				
>=4m		20	NL	NL			NL		NL		NL				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand															
>=0m, <1m		3	NL	NL			230		260		NL				
>=1m, <2m		3	NL	NL			NL		370		NL				
>=2m, <4m		3	NL	NL			NL		630		NL				
>=4m		3	NL	NL			NL		NL		NL				
NEPM 2013 Table 1A(1) HIL D Comm/Ind															
NEPM 2013 Table 1A(1) HIL C Rec															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil										700		1,000	2,500	10,000	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil										800		1,000	3,500	10,000	

Loc. Code	Date	Field ID	Depth	Lab Report
Comments				
#1 No				
#2 -				
#3 M. TRAN				
#4 Grey clay like soil.				
#5 Grey tan clay like soil.				
#6 Tan sandy soil.				
#7 Beige sandy soil.				
#8 Nil				
#9 Organic fibres detected.				
#10 No trace asbestos detected.				
#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.				
#12 Grey beige clay like soil.				
#13 Yes				
#14 Grey soil with organic matter.				



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

					TRH - NEPM 1999					PAHs - standard 16															
					C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b+g)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene				
Unit						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
LOR						10	20	50	50	50	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5					
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																									
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																									
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																									
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																									
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																									
>=0m, <1m																									
>=1m, <2m																									
>=2m, <4m																									
>=4m																									
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																									
>=0m, <1m																									
>=1m, <2m																									
>=2m, <4m																									
>=4m																									
NEPM 2013 Table 1A(1) HIL D Comm/Ind																									
NEPM 2013 Table 1A(1) HIL C Rec																									
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																									
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																									

Loc. Code	Date	Field ID	Depth	Lab Report	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH07	30 Apr 2025	BH07 0.5	0.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	30 Apr 2025	BH07 1.5	1.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	30 Apr 2025	BH07 3.0	3	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH08	29 Apr 2025	BH08 0.5	0.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH08 1.5	1.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH08 3.0	3	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH09	29 Apr 2025	BH09 0.5	0.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH09 1.5	1.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH09 3.0	3	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	Dup-02	-	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH10	29 Apr 2025	Split-02	-	1215277	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH10 0.5	0.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH10 2.0	2	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH10 3.5	3.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH11	29 Apr 2025	BH11 0.5	0.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH11 1.5	1.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	BH11 3.0	3	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	Dup-01	-	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	29 Apr 2025	Split-01	-	1215277	<20	<20	<50	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH12	28 Apr 2025	BH12 0.5	0.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	28 Apr 2025	BH12 1.5	1.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	28 Apr 2025	BH12 2.5	2.5	EM2507390	<10	<50	<100	<100	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Attachment 3
Table 1
Soil Results

					TRH - NEPM 1999					PAHs - standard 16									
					C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene
Unit						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR						10	20	50	50	50	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																			
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind																			
NEPM 2013 Table 1A(1) HIL C Rec																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report
Statistics				
Number of Results	22	22	22	22
Number of Detects	0	0	0	0
Minimum Concentration	<10	<20	<50	<50
Minimum Detect	ND	ND	ND	ND
Maximum Concentration	<20	<50	<100	<100
Maximum Detect	ND	ND	ND	ND
Average Concentration *	5.5	24	48	25
Geometric Average *	5.3	23	47	25
Median Concentration *	5	25	50	25
Standard Deviation *	1.5	4.4	7.4	0
Geometric Standard Deviation *	1.2	1.3	1.2	1
95% UCL (Student's-t) *	5.994	25.26	50.43	25
Number of Env Standard Exceedances	0	0	0	0
Number of Env Standard Exceedances (Detects Only)	0	0	0	0
% of Detects	0	0	0	0
% of Non-Detects	100	100	100	100
% of Detects at or above Env Standards	0	0	0	0
% of Results Below Env Standards or Non-Detect	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

	TRH - NEPM 1999					PAHs - standard 16											
	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 (Sum of Total)	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+g]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	10	20	50	50	50	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																	
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																	
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																	
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																	
>=0m, <1m																	
>=1m, <2m																	
>=2m, <4m																	
>=4m																	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																	
>=0m, <1m																	
>=1m, <2m																	
>=2m, <4m																	
>=4m																	
NEPM 2013 Table 1A(1) HIL D Comm/Ind																	
NEPM 2013 Table 1A(1) HIL C Rec																	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																	
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																	

Loc. Code	Date	Field ID	Depth	Lab Report
Comments				
#1 No				
#2 -				
#3 M. TRAN				
#4 Grey clay like soil.				
#5 Grey tan clay like soil.				
#6 Tan sandy soil.				
#7 Beige sandy soil.				
#8 Nil				
#9 Organic fibres detected.				
#10 No trace asbestos detected.				
#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.				
#12 Grey beige clay like soil.				
#13 Yes				
#14 Grey soil with organic matter.				



Attachment 3
Table 1
Soil Results

	PAHs - standard 16								OC Pesticides											
	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total) - Lab Calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(half LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4'-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial		11,000																		
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand		NL																		
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m		10																		
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m		170																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m		NL																		
>=1m, <2m		NL																		
>=2m, <4m		NL																		
>=4m		NL																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m		NL																		
>=1m, <2m		NL																		
>=2m, <4m		NL																		
>=4m		NL																		
NEPM 2013 Table 1A(1) HIL D Comm/Ind					4,000	40	40	40						45		530				
NEPM 2013 Table 1A(1) HIL C Rec					300	3	3	3						10		70				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report																		
BH07	30 Apr 2025	BH07 0.5	0.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	30 Apr 2025	BH07 1.5	1.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	30 Apr 2025	BH07 3.0	3	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH08	29 Apr 2025	BH08 0.5	0.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH08 1.5	1.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH08 3.0	3	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH09	29 Apr 2025	BH09 0.5	0.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH09 1.5	1.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH09 3.0	3	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	Dup-02	-	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH10	29 Apr 2025	Split-02	-	1215277	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	<0.05
	29 Apr 2025	BH10 0.5	0.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH10 2.0	2	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH10 3.5	3.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BH11	29 Apr 2025	BH11 0.5	0.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH11 1.5	1.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	BH11 3.0	3	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	Dup-01	-	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	29 Apr 2025	Split-01	-	1215277	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	<0.05
BH12	28 Apr 2025	BH12 0.5	0.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	28 Apr 2025	BH12 1.5	1.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	28 Apr 2025	BH12 2.5	2.5	EM2507390	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

	PAHs - standard 16								OC Pesticides											
	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total) - Lab Calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(half LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4'-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial		11,000																		
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand		NL																		
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m		10																		
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m		170																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m		NL																		
>=1m, <2m		NL																		
>=2m, <4m		NL																		
>=4m		NL																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m		NL																		
>=1m, <2m		NL																		
>=2m, <4m		NL																		
>=4m		NL																		
NEPM 2013 Table 1A(1) HIL D Comm/Ind					4,000	40	40	40						45		530				
NEPM 2013 Table 1A(1) HIL C Rec					300	3	3	3						10		70				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report																	
Statistics																					
Number of Results	22	22	22	22	22	22	22	22	2	2	22	22	22	22	22	22	22	20	20	22	
Number of Detects	0	0	0	0	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Minimum Detect	ND	ND	ND	ND	ND	ND	0.6	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	
Maximum Detect	ND	ND	ND	ND	ND	ND	0.6	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Average Concentration *	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.05	0.05	0.025	0.025	0.025	0.025	0.025	0.027	0.025	0.025	0.025	0.025	
Geometric Average *	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.05	0.05	0.025	0.025	0.025	0.025	0.025	0.027	0.025	0.025	0.025	0.025	
Median Concentration *	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.05	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	
Standard Deviation *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0074	0	0	0	0	
Geometric Standard Deviation *	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1	1	1	1	
95% UCL (Student's-t) *	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.05	0.05	0.025	0.025	0.025	0.025	0.025	0.03	0.025	0.025	0.025	0.025	
Number of Env Standard Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Env Standard Exceedances (Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Detects	0	0	0	0	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	
% of Non-Detects	100	100	100	100	100	100	0	0	100	100	100	100	100	100	100	100	100	100	100	100	
% of Detects at or above Env Standards	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Results Below Env Standards or Non-Detect	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

	PAHs - standard 16								OC Pesticides										
	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ) (half LOR) - Lab Calc	Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc	Organochlorine pesticides EPAV/c	Other organochlorine pesticides EPAV/c	4,4'-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial		11,000																	
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand		NL																	
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m		10																	
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m		170																	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m		NL																	
>=1m, <2m		NL																	
>=2m, <4m		NL																	
>=4m		NL																	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m		NL																	
>=1m, <2m		NL																	
>=2m, <4m		NL																	
>=4m		NL																	
NEPM 2013 Table 1A(1) HIL D Comm/Ind					4,000	40	40	40						45		530			
NEPM 2013 Table 1A(1) HIL C Rec					300	3	3	3						10		70			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report

- Comments
- #1 No
 - #2 -
 - #3 M. TRAN
 - #4 Grey clay like soil.
 - #5 Grey tan clay like soil.
 - #6 Tan sandy soil.
 - #7 Beige sandy soil.
 - #8 Nil
 - #9 Organic fibres detected.
 - #10 No trace asbestos detected.
 - #11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.
 - #12 Grey beige clay like soil.
 - #13 Yes
 - #14 Grey soil with organic matter.



Attachment 3
Table 1
Soil Results

	OC Pesticides																			
	4,4'-DDD	4,4'-DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan	Endosulfan I (alpha)	Endosulfan II (beta)	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene			
Unit	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg		
LOR	0.05	0.05	0.05	0.05	50	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	50	0.05	0.5	0.2		
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																				
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m		3	3																	
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m		180	180																	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(1) HIL D Comm/Ind			3,600		2,000,000				100				50		80,000	2,500	160			
NEPM 2013 Table 1A(1) HIL C Rec			400		340,000				20				10		10,000	400	30			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report																		
BH07	30 Apr 2025	BH07_0.5	0.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	30 Apr 2025	BH07_1.5	1.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	30 Apr 2025	BH07_3.0	3	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
BH08	29 Apr 2025	BH08_0.5	0.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH08_1.5	1.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH08_3.0	3	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
BH09	29 Apr 2025	BH09_0.5	0.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH09_1.5	1.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH09_3.0	3	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	Dup-02	-	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
BH10	29 Apr 2025	Split-02	-	1215277	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.5	<0.2	<0.2
	29 Apr 2025	BH10_0.5	0.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH10_2.0	2	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
BH11	29 Apr 2025	BH10_3.5	3.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH11_0.5	0.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH11_1.5	1.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	BH11_3.0	3	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	29 Apr 2025	Dup-01	-	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
BH12	29 Apr 2025	Split-01	-	1215277	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.5	<0.2	<0.2
	28 Apr 2025	BH12_0.5	0.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	28 Apr 2025	BH12_1.5	1.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05
	28 Apr 2025	BH12_2.5	2.5	EM2507390	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	-	-	<0.05



Attachment 3
Table 1
Soil Results

OC Pesticides																				
4,4'-DDD	4,4'-DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan	Endosulfan I (alpha)	Endosulfan II (beta)	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Tokuthion	Azinphos methyl		
Unit	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
LOR	0.05	0.05	0.05	0.05	50	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	50	0.05	0.5	0.2	0.05		
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																				
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m		3	3																	
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m		180	180																	
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(1) HIL D Comm/Ind			3,600		2,000,000			100				50		80,000	2,500	160				
NEPM 2013 Table 1A(1) HIL C Rec			400		340,000			20				10		10,000	400	30				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report																	
Statistics																					
Number of Results	22	22	22	22	20	22	22	22	22	22	22	22	22	22	22	22	2	2	22		
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Minimum Concentration	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.05	<0.5	<0.2	<0.05	
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Maximum Concentration	<0.05	<0.2	<0.05	<0.05	<50	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<50	<0.2	<0.5	<0.2	<0.2	
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Average Concentration *	0.025	0.093	0.025	0.025	25	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	25	0.093	0.25	0.1	0.032	
Geometric Average *	0.025	0.088	0.025	0.025	25	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	25	0.088	0.25	0.1	0.028	
Median Concentration *	0.025	0.1	0.025	0.025	25	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	25	0.1	0.25	0.1	0.025	
Standard Deviation *	0	0.022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.022	0	0	0.022	
Geometric Standard Deviation *	1	1.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.5	1	1	1.5	
95% UCL (Student's-t) *	0.025	0.101	0.025	0.025	25	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	25	0.101	0.25	0.1	0.0399	
Number of Env Standard Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Env Standard Exceedances (Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Non-Detects	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
% of Detects at or above Env Standards	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% of Results Below Env Standards or Non-Detect	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

	OC Pesticides																		
	4,4'-DDD	4,4'-DDT	DDT+DDE+DDD - Lab Calc	Dieldrin	Endosulfan	Endosulfan I (alpha)	Endosulfan II (beta)	Endosulfan Sulfate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Tokuthion	Azinphos methyl
Unit	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.05	0.05	0.05	0.05	50	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	50	0.05	0.5	0.2	0.05
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m		3	3																
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m		180	180																
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind			3,600		2,000,000				100				50		80,000	2,500	160		
NEPM 2013 Table 1A(1) HIL C Rec			400		340,000				20				10		10,000	400	30		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report

Comments

#1 No

#2 -

#3 M. TRAN

#4 Grey clay like soil.

#5 Grey tan clay like soil.

#6 Tan sandy soil.

#7 Beige sandy soil.

#8 Nil

#9 Organic fibres detected.

#10 No trace asbestos detected.

#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.

#12 Grey beige clay like soil.

#13 Yes

#14 Grey soil with organic matter.



Attachment 3
Table 1
Soil Results

OP Pesticides																			
Unit	Bolstar (Sulprofos)	Bromphos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN				
LOR	mg/kg 0.2	mg/kg 0.05	mg/kg 0.05	mg/kg 0.05	mg/kg 0.05	mg/kg 0.05	mg/kg 2	mg/kg 0.2	mg/kg 0.2	mg/kg 0.05	mg/kg 0.05	mg/kg 0.05	mg/kg 0.05	mg/kg 0.2	mg/kg 0.2				
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																			
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind					2,000														
NEPM 2013 Table 1A(1) HIL C Rec					250														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report															
BH07	30 Apr 2025	BH07 0.5	0.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	30 Apr 2025	BH07 1.5	1.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	30 Apr 2025	BH07 3.0	3	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
BH08	29 Apr 2025	BH08 0.5	0.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH08 1.5	1.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH08 3.0	3	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
BH09	29 Apr 2025	BH09 0.5	0.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH09 1.5	1.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH09 3.0	3	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	Dup-02	-	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
BH10	29 Apr 2025	Split-02	-	1215277	<0.2	-	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
	29 Apr 2025	BH10 0.5	0.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH10 2.0	2	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH10 3.5	3.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
BH11	29 Apr 2025	BH11 0.5	0.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH11 1.5	1.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	BH11 3.0	3	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	Dup-01	-	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	29 Apr 2025	Split-01	-	1215277	<0.2	-	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
BH12	28 Apr 2025	BH12 0.5	0.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	28 Apr 2025	BH12 1.5	1.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-
	28 Apr 2025	BH12 2.5	2.5	EM2507390	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-



Attachment 3
Table 1
Soil Results

OP Pesticides															
	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Cumaphos	Demeton-O	Demeton-S	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.2	0.05	0.05	0.05	0.05	0.05	2	0.2	0.2	0.05	0.05	0.05	0.05	0.2	0.2
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial															
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand															
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m															
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay															
>=0m, <1m															
>=1m, <2m															
>=2m, <4m															
>=4m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand															
>=0m, <1m															
>=1m, <2m															
>=2m, <4m															
>=4m															
NEPM 2013 Table 1A(1) HIL D Comm/Ind					2,000										
NEPM 2013 Table 1A(1) HIL C Rec					250										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil															

Loc. Code	Date	Field ID	Depth	Lab Report														
Statistics																		
Number of Results					2	20	20	22	22	22	2	2	2	20	22	22	2	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.2	<0.2
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.2	<0.05	<0.05	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.05	<0.2	<0.2	<0.2	<0.2
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.1	0.025	0.025	0.032	0.032	0.032	1	0.1	0.1	0.025	0.032	0.032	0.1	0.1
Geometric Average *					0.1	0.025	0.025	0.028	0.028	0.028	1	0.1	0.1	0.025	0.028	0.028	0.1	0.1
Median Concentration *					0.1	0.025	0.025	0.025	0.025	0.025	1	0.1	0.1	0.025	0.025	0.025	0.1	0.1
Standard Deviation *					0	0	0	0.022	0.022	0.022	0	0	0	0	0.022	0.022	0	0
Geometric Standard Deviation *					1	1	1	1.5	1.5	1.5	1	1	1	1	1.5	1.5	1	1
95% UCL (Student's-t) *					0.1	0.025	0.025	0.0399	0.0399	0.0399	1	0.1	0.1	0.025	0.0399	0.0399	0.1	0.1
Number of Env Standard Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100
% of Detects at or above Env Standards					0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Results Below Env Standards or Non-Detect					100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



	OP Pesticides														
	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.2	0.05	0.05	0.05	0.05	0.05	2	0.2	0.2	0.05	0.05	0.05	0.05	0.2	0.2
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial															
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand															
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m															
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay															
>=0m, <1m															
>=1m, <2m															
>=2m, <4m															
>=4m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand															
>=0m, <1m															
>=1m, <2m															
>=2m, <4m															
>=4m															
NEPM 2013 Table 1A(1) HIL D Comm/Ind					2,000										
NEPM 2013 Table 1A(1) HIL C Rec					250										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil															

Loc. Code	Date	Field ID	Depth	Lab Report
Comments				
#1 No				
#2 -				
#3 M. TRAN				
#4 Grey clay like soil.				
#5 Grey tan clay like soil.				
#6 Tan sandy soil.				
#7 Beige sandy soil.				
#8 Nil				
#9 Organic fibres detected.				
#10 No trace asbestos detected.				
#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.				
#12 Grey beige clay like soil.				
#13 Yes				
#14 Grey soil with organic matter.				



Attachment 3
Table 1
Soil Results

	OP Pesticides																			
	Ethion	Ethoprop	Fenamiphos	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Ethyl Parathion (or Parathion)	Phorate	Pirimiphos-ethyl	Pirimiphos-methyl	Prothiofos	Pyrazophos	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
LOR	0.05	0.2	0.05	0.2	0.2	0.05	0.05	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.05	0.2	0.05	0.2	
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																				
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																				
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(1) HIL D Comm/Ind																				
NEPM 2013 Table 1A(1) HIL C Rec																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report																		
BH07	30 Apr 2025	BH07_0.5	0.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	30 Apr 2025	BH07_1.5	1.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	30 Apr 2025	BH07_3.0	3	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
BH08	29 Apr 2025	BH08_0.5	0.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH08_1.5	1.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH08_3.0	3	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
BH09	29 Apr 2025	BH09_0.5	0.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH09_1.5	1.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH09_3.0	3	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	Dup-02	-	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
BH10	29 Apr 2025	Split-02	-	1215277	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	<0.2
	29 Apr 2025	BH10_0.5	0.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH10_2.0	2	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
BH11	29 Apr 2025	BH10_3.5	3.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH11_0.5	0.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH11_1.5	1.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	BH11_3.0	3	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	29 Apr 2025	Dup-01	-	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
BH12	29 Apr 2025	Split-01	-	1215277	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	<0.2
	28 Apr 2025	BH12_0.5	0.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	28 Apr 2025	BH12_1.5	1.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05
	28 Apr 2025	BH12_2.5	2.5	EM2507390	<0.05	-	<0.05	-	-	<0.05	<0.05	-	<0.2	-	<0.2	-	-	<0.2	-	<0.05	-	<0.05



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

	OP Pesticides																			
	Ethion	Ethoprop	Fenamiphos	Fenitrothion	Fensulfotiothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Ethyl Parathion (or Parathion)	Phorate	Priniphos-ethyl	Priniphos-methyl	Prothiofos	Pyrazophos	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.05	0.2	0.05	0.2	0.2	0.05	0.05	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.05	0.2	0.05	0.2	0.2
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																				
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																				
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																				
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1A(1) HIL D Comm/Ind																				
NEPM 2013 Table 1A(1) HIL C Rec																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				

Loc. Code	Date	Field ID	Depth	Lab Report																	
Statistics																					
Number of Results					22	2	20	2	2	22	22	2	22	2	22	2	2	22	2	20	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.05	<0.2	<0.05	<0.2	<0.2	<0.05	<0.05	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.05	<0.2	<0.05	<0.2
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.2	<0.2	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.05	<0.2	<0.05	<0.2
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.032	0.1	0.025	0.1	0.1	0.032	0.032	0.1	0.1	0.1	0.18	0.1	1	0.1	0.1	0.025	0.1
Geometric Average *					0.028	0.1	0.025	0.1	0.1	0.028	0.028	0.1	0.1	0.1	0.12	0.1	1	0.1	0.1	0.025	0.1
Median Concentration *					0.025	0.1	0.025	0.1	0.1	0.025	0.025	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.025	0.1
Standard Deviation *					0.022	0	0	0	0	0.022	0.022	0	0	0	0.26	0	0	0	0	0	0
Geometric Standard Deviation *					1.5	1	1	1	1	1.5	1.5	1	1	1	2	1	1	1	1	1	1
95% UCL (Student's-t) *					0.0399	0.1	0.025	0.1	0.1	0.0399	0.0399	0.1	0.1	0.1	0.279	0.1	1	0.1	0.1	0.025	0.1
Number of Env Standard Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
% of Detects at or above Env Standards					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Results Below Env Standards or Non-Detect					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

	OP Pesticides																		
	Ethion	Ethoprop	Fenamiphos	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Ethyl Parathion (or Parathion)	Phorate	Pririmphos-ethyl	Pririmphos-methyl	Prothiofos	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.05	0.2	0.05	0.2	0.2	0.05	0.05	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.05	0.2	0.05	0.2
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																			
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind																			
NEPM 2013 Table 1A(1) HIL C Rec																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report

Comments

#1 No

#2 -

#3 M. TRAN

#4 Grey clay like soil.

#5 Grey tan clay like soil.

#6 Tan sandy soil.

#7 Beige sandy soil.

#8 Nil

#9 Organic fibres detected.

#10 No trace asbestos detected.

#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.

#12 Grey beige clay like soil.

#13 Yes

#14 Grey soil with organic matter.



Attachment 3
Table 1
Soil Results

Unit	OP Pesticides				PCBs								PFAS - Perfluoroalkyl Sulfonic Acids				PFAS - Perfluoroa	
	Fenchlorphos (Ronne)	Terbufos	Trichloronate	Tetrachlorvinphos	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorononane sulfonate (PFNS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoropropanesulfonic acid (PFPrS)
LOR	mg/kg 0.2	mg/kg 0.2	mg/kg 0.2	mg/kg 0.2	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.1	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																		
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																		
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																		
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																		
>=0m, <1m																		
>=1m, <2m																		
>=2m, <4m																		
>=4m																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																		
>=0m, <1m																		
>=1m, <2m																		
>=2m, <4m																		
>=4m																		
NEPM 2013 Table 1A(1) HIL D Comm/Ind												7						
NEPM 2013 Table 1A(1) HIL C Rec												1						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																		

Loc. Code	Date	Field ID	Depth	Lab Report																	
BH07	30 Apr 2025	BH07 0.5	0.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	30 Apr 2025	BH07 1.5	1.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	30 Apr 2025	BH07 3.0	3	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
BH08	29 Apr 2025	BH08 0.5	0.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH08 1.5	1.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH08 3.0	3	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
BH09	29 Apr 2025	BH09 0.5	0.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH09 1.5	1.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH09 3.0	3	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	Dup-02	-	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
BH10	29 Apr 2025	Split-02	-	1215277	<0.2	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
	29 Apr 2025	BH10 0.5	0.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH10 2.0	2	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH10 3.5	3.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
BH11	29 Apr 2025	BH11 0.5	0.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH11 1.5	1.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	BH11 3.0	3	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	Dup-01	-	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	29 Apr 2025	Split-01	-	1215277	<0.2	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
BH12	28 Apr 2025	BH12 0.5	0.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	28 Apr 2025	BH12 1.5	1.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	<0.0002	<0.0002	-	<0.0002	<0.0002	-
	28 Apr 2025	BH12 2.5	2.5	EM2507390	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-



Attachment 3
Table 1
Soil Results

	OP Pesticides				PCBs								PFAS - Perfluoroalkyl Sulfonic Acids				PFAS - Perfluoroa	
	Fenchlorphos (Ronne)	Terbufos	Trichloronate	Tetrachlorvinphos	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorononane sulfonate (PFNS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoropropanesulfonic acid (PFPrS)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																		
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																		
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																		
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																		
>=0m, <1m																		
>=1m, <2m																		
>=2m, <4m																		
>=4m																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																		
>=0m, <1m																		
>=1m, <2m																		
>=2m, <4m																		
>=4m																		
NEPM 2013 Table 1A(1) HIL D Comm/Ind												7						
NEPM 2013 Table 1A(1) HIL C Rec												1						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																		

Loc. Code	Date	Field ID	Depth	Lab Report																
Statistics																				
Number of Results					2	2	2	2	2	2	2	2	2	22	21	21	2	21	21	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.2	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.2	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.1	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.000095	0.000095	0.00005	0.000095	0.000095	0.00005
Geometric Average *					0.1	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.000094	0.000094	0.00005	0.000094	0.000094	0.00005
Median Concentration *					0.1	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.0001	0.0001	0.00005	0.0001	0.0001	0.00005
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0.000015	0.000015	0	0.000015	0.000015	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1.2	1.2	1	1.2	1.2	1
95% UCL (Student's-t) *					0.1	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.0001009	0.0001009	0.00005	0.0001009	0.0001009	0.00005
Number of Env Standard Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
% of Detects at or above Env Standards					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Results Below Env Standards or Non-Detect					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

	OP Pesticides				PCBs								PFAS - Perfluoroalkyl Sulfonic Acids				PFAS - Perfluoroa	
	Fenchlorphos (Ronne)	Terbufos	Trichloronate	Tetrachlorvinphos	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Total)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanesulfonic acid (PFDS)	Perfluorononane sulfonate (PFNS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoropropanesulfonic acid (PFPrS)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																		
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																		
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																		
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																		
>=0m, <1m																		
>=1m, <2m																		
>=2m, <4m																		
>=4m																		
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																		
>=0m, <1m																		
>=1m, <2m																		
>=2m, <4m																		
>=4m																		
NEPM 2013 Table 1A(1) HIL D Comm/Ind												7						
NEPM 2013 Table 1A(1) HIL C Rec												1						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																		
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																		

Loc. Code	Date	Field ID	Depth	Lab Report
Comments				
#1 No				
#2 -				
#3 M. TRAN				
#4 Grey clay like soil.				
#5 Grey tan clay like soil.				
#6 Tan sandy soil.				
#7 Beige sandy soil.				
#8 Nil				
#9 Organic fibres detected.				
#10 No trace asbestos detected.				
#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.				
#12 Grey beige clay like soil.				
#13 Yes				
#14 Grey soil with organic matter.				



Attachment 3
Table 1
Soil Results

Unit	I kyl Sulfonic Acids		PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - Perfluoroalkyl Sulfonamide			PFAS - Perfluoroalkyl Sulfonate		
	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)
LOR	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0005	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																			
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind																			
NEPM 2013 Table 1A(1) HIL C Rec																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report																		
BH07	30 Apr 2025	BH07_0.5	0.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	30 Apr 2025	BH07_1.5	1.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	30 Apr 2025	BH07_3.0	3	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
BH08	29 Apr 2025	BH08_0.5	0.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH08_1.5	1.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH08_3.0	3	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
BH09	29 Apr 2025	BH09_0.5	0.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH09_1.5	1.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH09_3.0	3	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	Dup-02	-	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
BH10	29 Apr 2025	Split-02	-	1215277	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH10_0.5	0.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH10_2.0	2	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
BH11	29 Apr 2025	BH10_3.5	3.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH11_0.5	0.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH11_1.5	1.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	BH11_3.0	3	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	29 Apr 2025	Dup-01	-	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
BH12	29 Apr 2025	Split-01	-	1215277	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	28 Apr 2025	BH12_0.5	0.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	28 Apr 2025	BH12_1.5	1.5	EM2507390	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005
	28 Apr 2025	BH12_2.5	2.5	EM2507390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Attachment 3
Table 1
Soil Results

	I kyl Sulfonic Acids		PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - Perfluoroalkyl Sulfonamide			PFAS - Perfluoroalkyl Sulfonate		
	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluoroundecanoic acid (PFUnDA)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																			
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind																			
NEPM 2013 Table 1A(1) HIL C Rec																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report																
Statistics					21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Number of Results					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Detects					<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002
Minimum Concentration					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum Detect					<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Maximum Concentration					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Detect					0.000095	0.000095	0.00048	0.000095	0.000095	0.000095	0.000095	0.000095	0.000095	0.00023	0.000095	0.000095	0.00025	0.00011	0.00025	0.00011
Average Concentration *					0.000094	0.000094	0.00047	0.000094	0.000094	0.000094	0.000094	0.000094	0.000094	0.00021	0.000094	0.000094	0.00025	0.00011	0.00025	0.00011
Geometric Average *					0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00025	0.0001	0.0001	0.00025	0.0001	0.00025	0.0001
Median Concentration *					0.000015	0.000015	0.000075	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.00006	0.000015	0.000015	0	0.000045	0	0.000045
Standard Deviation *					1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.6	1.2	1.2	1	1.3	1	1.3
Geometric Standard Deviation *					0.0001009	0.0001009	0.00050449	0.0001009	0.0001009	0.0001009	0.0001009	0.0001009	0.0001009	0.00025359	0.0001009	0.0001009	0.00025	0.00013127	0.00025	0.00013127
95% UCL (Student's-t) *					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
% of Detects at or above Env Standards					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Results Below Env Standards or Non-Detect					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



Attachment 3
Table 1
Soil Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

	lkyl Sulfonic Acids		PFAS - Perfluoroalkyl Carboxylic Acids											PFAS - Perfluoroalkyl Sulfonamide			PFAS - Perfluoroalkyl Sulfonate		
	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluoroundecanoic acid (PFUnDA)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial																			
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand																			
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m																			
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1A(1) HIL D Comm/Ind																			
NEPM 2013 Table 1A(1) HIL C Rec																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			

Loc. Code	Date	Field ID	Depth	Lab Report
Comments				
#1 No				
#2 -				
#3 M. TRAN				
#4 Grey clay like soil.				
#5 Grey tan clay like soil.				
#6 Tan sandy soil.				
#7 Beige sandy soil.				
#8 Nil				
#9 Organic fibres detected.				
#10 No trace asbestos detected.				
#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.				
#12 Grey beige clay like soil.				
#13 Yes				
#14 Grey soil with organic matter.				



Attachment 3
Table 1
Soil Results

					nide	PFAS - Fluorotelomer Sulfonic Acids					PFAS - Sums				
					Perfluorooctane sulfonamide (FOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)		PFAS (Sum of Total)	PFAS (Sum of Total)(WA DER List)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
Unit					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR					0.0002	0.0001	0.0005	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial															
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand															
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m															
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay															
>=0m, <1m															
>=1m, <2m															
>=2m, <4m															
>=4m															
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand															
>=0m, <1m															
>=1m, <2m															
>=2m, <4m															
>=4m															
NEPM 2013 Table 1A(1) HIL D Comm/Ind															
NEPM 2013 Table 1A(1) HIL C Rec															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil															

Loc. Code	Date	Field ID	Depth	Lab Report										
BH07	30 Apr 2025	BH07_0.5	0.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	30 Apr 2025	BH07_1.5	1.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	30 Apr 2025	BH07_3.0	3	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
BH08	29 Apr 2025	BH08_0.5	0.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH08_1.5	1.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH08_3.0	3	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
BH09	29 Apr 2025	BH09_0.5	0.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH09_1.5	1.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH09_3.0	3	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	Dup-02	-	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
BH10	29 Apr 2025	Split-02	-	1215277	<0.0005	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
	29 Apr 2025	BH10_0.5	0.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH10_2.0	2	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH10_3.5	3.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
BH11	29 Apr 2025	BH11_0.5	0.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH11_1.5	1.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	BH11_3.0	3	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	Dup-01	-	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	29 Apr 2025	Split-01	-	1215277	<0.0005	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
BH12	28 Apr 2025	BH12_0.5	0.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	28 Apr 2025	BH12_1.5	1.5	EM2507390	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	-
	28 Apr 2025	BH12_2.5	2.5	EM2507390	-	-	-	-	-	-	-	-	-	-



Attachment 3
Table 1
Soil Results

	Perfluorooctane sulfonamide (FOSA)	PFAS - Fluorotelomer Sulfonic Acids				PFAS - Sums				
		4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	PFAS (Sum of Total)	PFAS (Sum of Total)(WADER List)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.0002	0.0001	0.0005	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	0.0001
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial										
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand										
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m										
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m										
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay										
>=0m, <1m										
>=1m, <2m										
>=2m, <4m										
>=4m										
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand										
>=0m, <1m										
>=1m, <2m										
>=2m, <4m										
>=4m										
NEPM 2013 Table 1A(1) HIL D Comm/Ind										
NEPM 2013 Table 1A(1) HIL C Rec										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil										

Loc. Code	Date	Field ID	Depth	Lab Report
Statistics				
Number of Results	21	21	21	21
Number of Detects	0	0	0	0
Minimum Concentration	<0.0002	<0.0001	<0.0005	<0.0001
Minimum Detect	ND	ND	ND	ND
Maximum Concentration	<0.0005	<0.0005	<0.0005	<0.0005
Maximum Detect	ND	ND	ND	ND
Average Concentration *	0.00011	0.00023	0.00025	0.00023
Geometric Average *	0.00011	0.00021	0.00025	0.00021
Median Concentration *	0.0001	0.00025	0.00025	0.00025
Standard Deviation *	0.000045	0.00006	0	0.00006
Geometric Standard Deviation *	1.3	1.6	1	1.6
95% UCL (Student's-t) *	0.00013127	0.00025359	0.00025	0.00025359
Number of Env Standard Exceedances	0	0	0	0
Number of Env Standard Exceedances (Detects Only)	0	0	0	0
% of Detects	0	0	0	0
% of Non-Detects	100	100	100	100
% of Detects at or above Env Standards	0	0	0	0
% of Results Below Env Standards or Non-Detect	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.



	nide	PFAS - Fluorotelomer Sulfonic Acids				PFAS - Sums				
	Perfluorooctane sulfonamide (FOSA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer Sulfonate (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	PFAS (Sum of Total)	PFAS (Sum of Total)(WA DER List)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of PFHxS and PFOS	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.0002	0.0001	0.0005	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	0.0001
CRC CARE 2011 Soil Direct Contact HSL-D Commercial / Industrial										
CRC CARE 2011 Soil HSL Vap.Int Intrusive Works,0 to <2m,Sand										
NEPM 2013 EIL-Areas of Ecological Significance >=0m, <2m										
NEPM 2013 EIL-Urban Residential- Public Open Space >=0m, <2m										
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Clay										
>=0m, <1m										
>=1m, <2m										
>=2m, <4m										
>=4m										
NEPM 2013 Table 1A(3) HSL D Comm/Ind Soil for Vapour Intrusion, Sand										
>=0m, <1m										
>=1m, <2m										
>=2m, <4m										
>=4m										
NEPM 2013 Table 1A(1) HIL D Comm/Ind										
NEPM 2013 Table 1A(1) HIL C Rec										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil										

Loc. Code	Date	Field ID	Depth	Lab Report
Comments				
#1 No				
#2 -				
#3 M. TRAN				
#4 Grey clay like soil.				
#5 Grey tan clay like soil.				
#6 Tan sandy soil.				
#7 Beige sandy soil.				
#8 Nil				
#9 Organic fibres detected.				
#10 No trace asbestos detected.				
#11 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.				
#12 Grey beige clay like soil.				
#13 Yes				
#14 Grey soil with organic matter.				



Attachment 3
Table 2
RPD Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

Loc. Code	Date	Field ID	Sample Type	Lab Report	BH09	BH09	RPD	BH09	BH09	RPD	BH11	BH11	RPD	BH11	BH11	RPD
Analyte	Unit	LOR	BH09	BH09	RPD	BH09	BH09	RPD	BH11	BH11	RPD	BH11	BH11	RPD	BH11	BH11
Inorganics																
% Moisture	%	1	-	-	-	-	1.3	-	-	-	-	-	11	-	-	-
Moisture (%)	%	1	<1.0	1.8	57	<1.0	-	-	<1.0	1.3	26	<1.0	-	-	-	-
Asbestos																
Asbestos Fibres (g)	g	0.1	0 ^{#1}	0 ^{#1}	-	0 ^{#1}	-	-	0 ^{#1}	0 ^{#1}	-	0 ^{#1}	-	-	-	-
Asbestos (Trace)	Fibres		0 ^{#1}	0 ^{#1}	-	0 ^{#1}	-	-	0 ^{#1}	0 ^{#1}	-	0 ^{#1}	-	-	-	-
Asbestos Type	-		1 ^{#2}	1 ^{#2}	0	1 ^{#2}	-	-	1 ^{#2}	1 ^{#2}	0	1 ^{#2}	-	-	-	-
weight of sample	g	0.01	473	492	4	473	-	-	402	420	4	402	-	-	-	-
APPROVED IDENTIFIER:	-		1 ^{#3}	1 ^{#3}	0	1 ^{#3}	-	-	1 ^{#3}	1 ^{#3}	0	1 ^{#3}	-	-	-	-
Organic Fibre	g/kg		0 ^{#1}	0 ^{#1}	-	0 ^{#1}	-	-	1 ^{#10}	0 ^{#1}	200	1 ^{#10}	-	-	-	-
Synthetic Mineral Fibre	g/kg		0 ^{#1}	0 ^{#1}	-	0 ^{#1}	-	-	0 ^{#1}	0 ^{#1}	-	0 ^{#1}	-	-	-	-
Asbestos from ACM in Soil	%		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
ACM - Comment	-		-	-	-	-	1 ^{#6}	-	-	-	-	-	1 ^{#6}	-	-	-
Asbestos from FA & AF in Soil	%		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
AF - Comment	-		-	-	-	-	1 ^{#6}	-	-	-	-	-	1 ^{#6}	-	-	-
FA- Comment	-		-	-	-	-	1 ^{#6}	-	-	-	-	-	1 ^{#6}	-	-	-
Approximate Sample Mass	g		-	-	-	-	60	-	-	-	-	-	341	-	-	-
ACM Mass	g		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
Mass AF	g		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
Mass Asbestos in ACM	g		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
Friable Asbestos (FA & AF) - Mass	g		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
Mass Asbestos in FA	g		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
Mass asbestos in AF	g		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
Mass FA	g		-	-	-	-	0.0000	-	-	-	-	-	0.0000	-	-	-
Organic Fibres - Comment	-		-	-	-	-	1 ^{#7}	-	-	-	-	-	1 ^{#7}	-	-	-
Respirable Fibres - Comment	-		-	-	-	-	1 ^{#8}	-	-	-	-	-	1 ^{#8}	-	-	-
Asbestos Reported Result	-		-	-	-	-	1 ^{#9}	-	-	-	-	-	1 ^{#9}	-	-	-
Description	-		1 ^{#4}	1 ^{#5}	0	1 ^{#4}	-	-	1 ^{#11}	1 ^{#4}	0	1 ^{#11}	-	-	-	-
Synthetic Fibres - Comment	-		-	-	-	-	1 ^{#6}	-	-	-	-	-	1 ^{#6}	-	-	-
Metals																
Arsenic	mg/kg	2	<5	<5	0	<5	3.7	0	<5	<5	0	<5	2.5	0	-	-
Cadmium	mg/kg	0.4	<1	<1	0	<1	<0.4	0	<1	<1	0	<1	<0.4	0	-	-
Chromium (III+VI)	mg/kg	2	6	8	29	6	9.2	42	7	7	0	7	11	44	-	-
Copper	mg/kg	5	<5	6	18	<5	6.1	20	<5	<5	0	<5	<5	0	-	-
Lead	mg/kg	5	<5	<5	0	<5	<5	0	<5	<5	0	<5	<5	0	-	-
Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	-	-
Nickel	mg/kg	2	8	11	32	8	10	22	8	7	13	8	7.8	3	-	-
Zinc	mg/kg	5	10	14	33	10	15	40	12	11	9	12	14	15	-	-
BTEXN																
Naphthalene (value used in F2 calc)	mg/kg	0.5	<1	<1	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0	-	-
Benzene	mg/kg	0.1	<0.2	<0.2	0	<0.2	<0.1	0	<0.2	<0.2	0	<0.2	<0.1	0	-	-
Toluene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	-	-
Ethylbenzene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	-	-
Xylene (o)	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0	-	-
Xylene (m & p)	mg/kg	0.2	<0.5	<0.5	0	<0.5	<0.2	0	<0.5	<0.5	0	<0.5	<0.2	0	-	-
Xylene Total	mg/kg	0.3	<0.5	<0.5	0	<0.5	<0.3	0	<0.5	<0.5	0	<0.5	<0.3	0	-	-
BTEX (Sum of Total) - Lab Calc	mg/kg	0.2	<0.2	<0.2	0	<0.2	-	-	<0.2	<0.2	0	<0.2	-	-	-	-
TRH - NEPM 2013																
F1 (C6-C10 minus BTEX)	mg/kg	10	<10	<10	0	<10	<20	0	<10	<10	0	<10	<20	0	-	-
C6-C10 Fraction	mg/kg	10	<10	<10	0	<10	<20	0	<10	<10	0	<10	<20	0	-	-
F2 (>C10-C16 minus Naphthalene)	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	-	-
>C10-C16 Fraction	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	-	-
F3 (>C16-C34 Fraction)	mg/kg	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	-	-
F4 (>C34-C40 Fraction)	mg/kg	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	-	-
>C10-C40 (Sum of Total)	mg/kg	50	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0	-	-



Attachment 3
Table 2
RPD Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

Loc. Code	Date	Field ID	Sample Type	Lab Report	BH09	BH09	RPD	BH09	BH09	RPD	BH11	BH11	RPD	BH11	BH11	RPD
Analyte	Unit	LOR	BH09	BH09	RPD	BH09	BH09	RPD	BH11	BH11	RPD	BH11	BH11	RPD	BH11	BH11
TRH - NEPM 1999																
C6-C9 Fraction	mg/kg	10	<10	<10	0	<10	<20	0	<10	<10	0	<10	<20	0	<10	<20
C10-C14 Fraction	mg/kg	20	<50	<50	0	<50	<20	0	<50	<50	0	<50	<20	0	<50	<20
C15-C28 Fraction	mg/kg	50	<100	<100	0	<100	<50	0	<100	<100	0	<100	<50	0	<100	<50
C29-C36 Fraction	mg/kg	50	<100	<100	0	<100	<50	0	<100	<100	0	<100	<50	0	<100	<50
C10-C36 (Sum of Total)	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50
PAHs - standard 16																
Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
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	<0.5	<0.5	0	<0.5	<0.5
Naphthalene	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
Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
PAHs (Sum of total) - Lab calc	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
Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	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
Total 8 PAHs (as BaP TEQ) (half LOR) - Lab Calc	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6
Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2
OC Pesticides																
Organochlorine pesticides EPAVic	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-
Other organochlorine pesticides EPAVic	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-
4,4'-DDE	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
a-BHC	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Aldrin	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
b-BHC	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Chlordane	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.05	0	<0.05	<0.1	0	<0.05	<0.1
Chlordane (cis)	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-	<0.05	-
Chlordane (trans)	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-	<0.05	-
d-BHC	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
4,4'-DDD	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
4,4'-DDT	mg/kg	0.05	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05
DDT+DDE+DDD - Lab Calc	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Dieldrin	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Endosulfan	µg/kg	50	<50	<50	0	<50	-	-	<50	<50	0	<50	-	-	<50	-
Endosulfan I (alpha)	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Endosulfan II (beta)	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Endosulfan Sulfate	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Endrin	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
Endrin ketone	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05



Attachment 3
Table 2
RPD Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

Loc. Code Date Field ID Sample Type Lab Report			BH09	BH09	RPD	BH09	BH09	RPD	BH11	BH11	RPD	BH11	BH11	RPD
			29 Apr 2025	29 Apr 2025		29 Apr 2025	29 Apr 2025		29 Apr 2025	29 Apr 2025		29 Apr 2025	29 Apr 2025	
			BH09_3.0	Dup-02		BH09_3.0	Split-02		BH11_1.5	Dup-01		BH11_1.5	Split-01	
			Normal	Field_D		Normal	Interlab_D		Normal	Field_D		Normal	Interlab_D	
			EM2507390	EM2507390		EM2507390	1215277		EM2507390	EM2507390		EM2507390	1215277	
Analyte	Unit	LOR												
OC Pesticides - con't														
Heptachlor	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Heptachlor epoxide	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Hexachlorobenzene	µg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
Methoxychlor	mg/kg	0.05	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.2	0	<0.2	<0.05	0
Toxaphene	mg/kg	0.5	-	-	-	-	<0.5	-	-	-	-	-	<0.5	-
OP Pesticides														
Tokuthion	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Azinphos methyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Bolstar (Sulprofos)	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Bromophos-ethyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-
Carbophenothion	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-
Chlorfenvinphos	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Chlorpyrifos	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Chlorpyrifos-methyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Coumaphos	mg/kg	2	-	-	-	-	<2	-	-	-	-	-	<2	-
Demeton-O	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Demeton-S	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Demeton-S-methyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-
Diazinon	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Dichlorvos	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Dimethoate	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Disulfoton	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
EPN	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Ethion	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Ethoprop	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Fenamiphos	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Fensulfothion	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Fenthion	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Malathion	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.05	0	<0.05	<0.2	0
Merphos	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Methyl parathion	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Mevinphos (Phosdrin)	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Monocrotophos	mg/kg	0.2	<0.2	<0.2	0	<0.2	<2	0	<0.2	<0.2	0	<0.2	<2	0
Naled (Dibrom)	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Omethoate	mg/kg	2	-	-	-	-	<2	-	-	-	-	-	<2	-
Ethyl Parathion (or Parathion)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Phorate	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Pirimiphos-ethyl	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-
Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Prothiofos	mg/kg	0.05	<0.05	<0.05	0	<0.05	-	-	<0.05	<0.05	0	<0.05	-	-
Pyrazophos	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Fenchlorphos (Ronnel)	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Terbufos	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Trichloronate	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
PCBs														
Arochlor 1016	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Arochlor 1221	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Arochlor 1232	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Arochlor 1242	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Arochlor 1248	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Arochlor 1254	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Arochlor 1260	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
PCBs (Total)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0



Attachment 3
Table 2
RPD Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

Loc. Code Date Field ID Sample Type Lab Report			BH09	BH09	RPD	BH09	BH09	RPD	BH11	BH11	RPD	BH11	BH11	RPD
			29 Apr 2025	29 Apr 2025		29 Apr 2025	29 Apr 2025		29 Apr 2025	29 Apr 2025		29 Apr 2025	29 Apr 2025	
			BH09_3.0	Dup-02		BH09_3.0	Split-02		BH11_1.5	Dup-01		BH11_1.5	Split-01	
			Normal	Field_ID		Normal	Interlab_D		Normal	Field_D		Normal	Interlab_D	
			EM2507390	EM2507390		EM2507390	1215277		EM2507390	EM2507390		EM2507390	1215277	
Analyte	Unit	LOR												
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorononane sulfonate (PFNS)	mg/kg	0.0001	-	-	-	-	<0.0001	-	-	-	-	-	<0.0001	-
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.0001	-	-	-	-	<0.0001	-	-	-	-	-	<0.0001	-
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorobutanoic acid (PFBA)	mg/kg	0.0005	<0.001	<0.001	0	<0.001	<0.0005	0	<0.001	<0.001	0	<0.001	<0.0005	0
Perfluorodecanoic acid (PFDA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorononanoic acid (PFNA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorooctanoic acid (PFOA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0001	<0.0005	<0.0005	0	<0.0005	<0.0001	0	<0.0005	<0.0005	0	<0.0005	<0.0001	0
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
PFAS - Perfluoroalkyl Sulfonamide														
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.0005	0	<0.0002	<0.0002	0	<0.0002	<0.0005	0
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.0005	0	<0.0002	<0.0002	0	<0.0002	<0.0005	0
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.0005	0	<0.0002	<0.0002	0	<0.0002	<0.0005	0
PFAS - Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0001	<0.0005	<0.0005	0	<0.0005	<0.0001	0	<0.0005	<0.0005	0	<0.0005	<0.0001	0
6:2 Fluorotelomer Sulfonate (6:2 FTS)	mg/kg	0.0005	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0	<0.0005	<0.0005	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0001	<0.0005	<0.0005	0	<0.0005	<0.0001	0	<0.0005	<0.0005	0	<0.0005	<0.0001	0
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0001	<0.0005	<0.0005	0	<0.0005	<0.0001	0	<0.0005	<0.0005	0	<0.0005	<0.0001	0
PFAS - Sums														
PFAS (Sum of Total)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.0005	0	<0.0002	<0.0002	0	<0.0002	<0.0005	0
PFAS (Sum of Total)(WA DER List)	mg/kg	0.0002	<0.0002	<0.0002	0	<0.0002	<0.0005	0	<0.0002	<0.0002	0	<0.0002	<0.0005	0
Sum of US EPA PFAS (PFOS + PFOA)*	mg/kg	0.0001	-	-	-	-	<0.0001	-	-	-	-	-	<0.0001	-
Sum of PFHxS and PFOS	mg/kg	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	mg/kg	0.0001	-	-	-	-	<0.0001	-	-	-	-	-	<0.0001	-



Attachment 3
Table 2
RPD Results

3Rivers Joint Venture
Wanganella
3Rivers - NSW SDLAM Engineering Services

Loc. Code Date Field ID Sample Type Lab Report	BH09		RPD	BH09		RPD	BH11		RPD	BH11		RPD
	29 Apr 2025			29 Apr 2025			29 Apr 2025			29 Apr 2025		
	BH09_3.0			Dup-02			BH11_1.5			Dup-01		
	Normal			Field_D			Normal			Field_D		
	EM2507390			EM2507390			EM2507390			EM2507390		
Analyte	Unit	LOR										

Comments

#1 No
#2 -
#3 M. TRAN
#4 Tan sandy soil.
#5 Grey clay like soil.
#6 Nil
#7 Organic fibres detected.
#8 No trace asbestos detected.
#9 No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected.
#10 Yes
#11 Grey soil with organic matter.

RPD Comment

*RPDs have only been considered where a concentration is greater than 1 times the EQL.
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 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 ID
			Date
			Sample Type
			Lab Report
			R1
			30 Apr 2025
			Rinsate
			EM2507390
Analyte	Unit	LOR	
Metals			
Arsenic (filtered)	mg/L	0.001	<0.001
Cadmium (filtered)	mg/L	0.0001	<0.0001
Chromium (III+VI) (filtered)	mg/L	0.001	0.001
Copper (filtered)	mg/L	0.001	0.001
Lead (filtered)	mg/L	0.001	0.001
Mercury (filtered)	mg/L	0.0001	<0.0001
Nickel (filtered)	mg/L	0.001	0.001
Zinc (filtered)	mg/L	0.005	<0.005
BTEXN			
Naphthalene (value used in F2 calc)	µg/L	5	<5
Benzene	µg/L	1	<1
Toluene	µg/L	2	<2
Ethylbenzene	µg/L	2	<2
Xylene (o)	µg/L	2	<2
Xylene (m & p)	µg/L	2	<2
Xylene Total	µg/L	2	<2
BTEX (Sum of Total) - Lab Calc	µg/L	1	<1
TRH - NEPM 2013			
F1 (C6-C10 minus BTEX)	µg/L	20	<20
C6-C10 Fraction	µg/L	20	<20
F2 (>C10-C16 minus Naphthalene)	µg/L	100	<100
>C10-C16 Fraction	µg/L	100	<100
F3 (>C16-C34 Fraction)	µg/L	100	<100
F4 (>C34-C40 Fraction)	µg/L	100	<100
>C10-C40 (Sum of Total)	µg/L	100	<100
TRH - NEPM 1999			
C6-C9 Fraction	µg/L	20	<20
C10-C14 Fraction	µg/L	50	<50
C15-C28 Fraction	µg/L	100	<100
C29-C36 Fraction	µg/L	50	<50
C10-C36 (Sum of Total)	µg/L	50	<50
PAHs - standard 16			
Acenaphthene	µg/L	1	<1.0
Acenaphthylene	µg/L	1	<1.0
Anthracene	µg/L	1	<1.0
Benz(a)anthracene	µg/L	1	<1.0
Benzo(a)pyrene	µg/L	0.5	<0.5
Benzo[b+j]fluoranthene	µg/L	1	<1.0
Benzo(k)fluoranthene	µg/L	1	<1.0
Benzo(g,h,i)perylene	µg/L	1	<1.0
Chrysene	µg/L	1	<1.0
Dibenz(a,h)anthracene	µg/L	1	<1.0
Fluoranthene	µg/L	1	<1.0
Fluorene	µg/L	1	<1.0
Indeno(1,2,3-c,d)pyrene	µg/L	1	<1.0
Naphthalene	µg/L	1	<1.0
Phenanthrene	µg/L	1	<1.0
Pyrene	µg/L	1	<1.0
PAHs (Sum of total) - Lab calc	µg/L	0.5	<0.5
Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	µg/L	0.5	<0.5
PFAS - Perfluoroalkyl Sulfonic Acids			
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.02	<0.02
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	<0.01
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	<0.01
PFAS - Perfluoroalkyl Carboxylic Acids			
Perfluorobutanoic acid (PFBA)	µg/L	0.1	<0.1
Perfluorodecanoic acid (PFDA)	µg/L	0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	µg/L	0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	µg/L	0.02	<0.02
Perfluorohexanoic acid (PFHxA)	µg/L	0.02	<0.02
Perfluorononanoic acid (PFNA)	µg/L	0.02	<0.02
Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01
Perfluoropentanoic acid (PFPeA)	µg/L	0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.05	<0.05
Perfluorotridecanoic acid (PFTTrDA)	µg/L	0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.02	<0.02
PFAS - Perfluoroalkyl Sulfonamide			
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.05	<0.05
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.02	<0.02
N-Methyl perfluorooctane sulfonamidoethanol (MEFOSE)	µg/L	0.05	<0.05
Perfluorooctane sulfonamide (FOSA)	µg/L	0.02	<0.02



			Field ID	R1
			Date	30 Apr 2025
			Sample Type	Rinsate
			Lab Report	EM2507390
Analyte	Unit	LOR		
PFAS - Fluorotelomer Sulfonic Acids				
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.05	<0.05	
6:2 Fluorotelomer Sulfonate (6:2 FTS)	µg/L	0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.05	<0.05	
PFAS - Sums				
PFAS (Sum of Total)	µg/L	0.01	<0.01	
PFAS (Sum of Total)(WA DER List)	µg/L	0.01	<0.01	
Sum of PFHxS and PFOS	µg/L	0.01	<0.01	

GA5000 Gas Readings**Date** **7/05/2025**

Location	Pressure (mbar)		Flow (L/hr)		Level Gas Readings (% v/v)			Level Gas Readings (ppm)		Peak Gas Readings (% v/v)		Min Gas Reading (% v/v)	Balance	Comment
	Barometric	Relative	Min	Max	CH ₄	CO ₂	O ₂	CO	H ₂ S	CH ₄	CO ₂	O ₂		
BH07	1009	0.07	0	0	0	2.4	18	0	1	0	2.4	18	79.6	Air-tight, locked
BH08	1010	-14.15	0	0	0	0.8	19	0	1	0	0.8	19	80.1	Air-tight, locked
BH09	1010	0.17	0	0	0	0.2	18.9	0	0	0	1.2	18.9	79.9	Cap slightly loose, locked
BH10	1010	-14.77	0	0.1	0	1.5	19.1	0	0	0	1.5	19.1	79.4	Air-tight, locked
BH11	1010	-15.85	0	0	0	0.6	19.8	0	0	0	0.6	19.8	79.6	Air-tight, locked
BH12	1010	-15.5	0	0	0	0.9	19.5	0	0	0	0.9	19.5	79.6	Air-tight, locked

Attachment 4

QAQC report

1. QAQC review

1.1 Summary

Quality assurance and quality control (QA/QC) practices were applied to all stages of data gathering and subsequent sample handling procedures and were designed to provide control over both field and laboratory operations. Additionally, the analytical laboratory completed their own internal QA procedures, as required by NATA registration, during the analysis of samples.

The QA/QC program undertaken as part of the assessment by GHD included the following:

- Use of appropriately qualified and trained staff
- Preservation of samples with ice during transport from the field to the laboratory
- Transportation of samples with accompanying chain-of-custody (COC) documentation
- Compliance with sample holding times
- Review of results of field quality assurance samples
- Review of results of internal laboratory quality control procedures which included analysis of method blanks, laboratory duplicate samples, laboratory control samples, matrix spike samples and surrogates

Field quality assurance samples provide information that discounts or potentially identifies any errors due to possible sources of cross contamination, inconsistencies in sampling and analytical techniques used. The quality assurance samples collected during the field program included:

- **Field duplicates:** Coded duplicate samples submitted to the primary laboratory for analysis as individual samples without any indication to the laboratory that they have been duplicated.
- **Field splits:** Duplicate samples with one sample being sent to a secondary laboratory for analysis. The same parameters are analysed utilising similar analytical techniques.
- **Rinsate blank:** A sample of deionised water collected from equipment used during sampling to indicate whether cross contamination occurred from equipment.

Table 7 summarises the QA/QC Data Quality Indicators (DQIs) used in the investigation and compliance outcome of these indicators. Some relative percentage difference (RPD) outliers occurred; however the concentrations were typically close to the LOR which increases the sensitivity of the RPD test.

Table 7 Summary of QA/QC compliance

Item	Objective	Compliance (Yes/No)	References
GHD QA/QC			
Comparison of field and analytical data	Agreement between visual and olfactory evidence with laboratory results	Yes	Discussed in Section 5
Field instruments within calibration period	Check field instruments are within calibration period	Yes	Certificates appended to this QAQC report

Item	Objective	Compliance (Yes/No)	References
Chain of Custody documentation	Supply Chain of Custody Documentation with all samples	Yes	COC included in Attachment 5
Sample analysis and extraction holding times	Comply with holding times	Yes with some exceptions	Exceptions noted in Laboratory SRNs in Attachment 5
Analysis of inter and intra-laboratory duplicate samples	Analysis of duplicate samples in 5% of primary samples and 10% of primary samples tested for PFAS; No RPD outliers	Yes, with some exceptions	RPD results in Attachment 3
Analysis of rinsate and trip blank samples	Analysis of one rinsate sample per sampling equipment per day and one trip blank sample per sample batch.	Yes, with some exceptions	Results in Attachment 3
Laboratory QA/QC			
Analysis of laboratory method blanks	No contamination of blanks	Yes No Method blank outliers	Results in in Attachment 5
Analysis of laboratory internal duplicates	Frequencies and RPDs within guideline and internal laboratory limits	Yes No duplicate outliers	Results in in Attachment 5
Analysis of matrix spike recoveries	Recoveries within the laboratory specified recovery limits	One control spike outlier and one method spike outlier less than the lower control limit	Results in in Attachment 5

1.2 RPD and Rinsate results

1.2.1 Field duplicate and split duplicate frequency

Table 8 summaries the total number of primary, field and split duplicate samples collected and analysed for contaminants of potential concern in the soil investigation. The required frequency is one field duplicate and one split duplicate sample per twenty (20) primary samples (i.e. 5% frequency). Note for PFAS the required frequency is one blind duplicate and one split duplicate sample per ten (10) primary samples (i.e. 10% frequency).

Table 8 Field and split duplicate sampling and analysis frequency

Matrix	No. of primary samples	No. of field duplicates	Frequency (%)	No. of split duplicates analysed	Frequency (%)
Soil	20	2	10	2	10

1.2.2 Relative percentage difference

A quantitative measure of the duplicate sample results was made using calculated relative percentage difference (RPD) values for each chemical. The RPD values were calculated using the following equation.

$$RPD(\%) = \frac{(C_o - C_s)}{\left(\frac{C_o + C_s}{2}\right)} \times 100$$

where C_o = reported concentration of the chemical of interest from the original parent sample

C_s = reported concentration of the chemical of interest from the duplicate sample

The results of the quality control program and calculated RPD values are provided in Attachment 3. The results show some RPD exceedances for organic fibre, chromium, nickel and zinc, however the RPD exceedances were not consistently reported across all samples. This may indicate heterogeneity in the soils rather than consistent differences in the analytical process.

1.2.3 Rinsate results

Rinsate results indicated some metals (chromium, copper, lead and nickel) may have been introduced to samples off the auger, however the concentrations reported were 0.001 mg/L for all metals and do not impact the outcome of the investigation.

PID Calibration Certificate

182.0 1542025M

Instrument Tiger
Serial No. T-105902



Air-Met Scientific Pty Ltd
1800 000 744

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 eV			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm	100ppm	250ppm
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		100ppm Isobutylene	NIST	ME1267		100ppm Isobutylene

Calibrated by: Harrisin Meers

Calibration date: 15/04/2025

Next calibration due: 12/10/2025

Gas Calibration Certificate

30.0 1542025M



Instrument VP5
Serial No. 190319C-001
Sensors O2 CO H2S LEL

Air-Met Scientific Pty Ltd
1800 000 744

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
	Intensity	✓				
Display	Operation (segments)	✓				
	Condition	✓				
Grill Filter	Seal	✓				
	Operation	✓				
Pump	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
	Condition	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	O2	✓	Low	High	TWA	STEL
			19.50%	23.50%	N/A	N/A
			30ppm	60ppm	30ppm	200ppm
			10ppm	15ppm	10ppm	15ppm
			5.00%	10.00%	N/A	N/A
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

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.9% O2		Fresh Air	20.9% O2
CO		100ppm CO	NIST	ME1266	100ppm CO
H2S		25ppm H2S	NIST	ME1266	25ppm H2S
LEL		50% LEL	NIST	ME1266	50% LEL

Calibrated by: Harrison Meers

Calibration date: 15-Apr-25

Next calibration due: 12-Oct-25

Gas Calibration Certificate

107.0 552025M



Instrument **GA5000**
Serial No. **G504865**
Sensors **O2 CO H2S CH4 CO2**

Air-Met Scientific Pty Ltd
1800 000 744

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	✓	
	CO	✓	
	H2S	✓	
	CH4	✓	
	CO2	✓	
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% O2		Fresh Air	20.9% O2
CO		100ppm CO	NIST	ME1192	100ppm CO
H2S		25ppm H2S	NIST	ME1192	25ppm H2S
CH4		60% CH4	NIST	ME1126	60% CH4
CO2		40% CO2	NIST	ME1126	40% CO2

Calibrated by: Jack Sparke

Calibration date: **05/05/2025**

Next calibration due: **01/11/2025**

Attachment 5

Laboratory reports



CERTIFICATE OF ANALYSIS

Work Order : **EM2507390**
Client : **GHD PTY LTD**
Contact : Meg Turner
Address : LEVEL 8, 180 LONSDALE ST
MELBOURNE VIC, AUSTRALIA 3001
Telephone : ----
Project : 12537654
Order number : ----
C-O-C number : ----
Sampler : Meg Turner
Site :
Quote number : EN/000
No. of samples received : 24
No. of samples analysed : 24

Page : 1 of 43
Laboratory : Environmental Division Melbourne
Contact : Peter Ravlic
Address : 4 Westall Rd Springvale VIC Australia 3171
Telephone : +6138549 9645
Date Samples Received : 01-May-2025 12:15
Date Analysis Commenced : 02-May-2025
Issue Date : 07-May-2025 17:51



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
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
MINNIE TRAN	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC



General Comments

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

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- 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 QSM5.4 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.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP080: Samples (EM2507390-022,024) TRIP SPIKE and TRIP SPIKE CONTROL contain volatile compounds spiked into the sample containers prior to dispatch from the laboratory.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.



- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH12_0.5	BH12_1.5	BH12_2.5	BH11_0.5	BH11_1.5
Sampling date / time					28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-001	EM2507390-002	EM2507390-003	EM2507390-004	EM2507390-005
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		10.3	<1.0	1.2	10.2	<1.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Synthetic Mineral Fibre	----	-	--		No	No	No	No	No
Organic Fibre	----	-	--		No	No	No	No	Yes
Sample weight (dry)	----	0.01	g		287	395	460	334	402
APPROVED IDENTIFIER:	----	-	--		M. TRAN	M. TRAN	M. TRAN	M. TRAN	M. TRAN
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		20	6	7	21	7
Copper	7440-50-8	5	mg/kg		13	<5	<5	12	<5
Lead	7439-92-1	5	mg/kg		11	<5	<5	11	<5
Nickel	7440-02-0	2	mg/kg		16	8	9	17	8
Zinc	7440-66-6	5	mg/kg		25	11	12	24	12
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH12_0.5	BH12_1.5	BH12_2.5	BH11_0.5	BH11_1.5
Sampling date / time				28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-001	EM2507390-002	EM2507390-003	EM2507390-004	EM2507390-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Total Chlordane (sum)	-----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
[^] Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH12_0.5	BH12_1.5	BH12_2.5	BH11_0.5	BH11_1.5
Sampling date / time				28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-001	EM2507390-002	EM2507390-003	EM2507390-004	EM2507390-005
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH12_0.5	BH12_1.5	BH12_2.5	BH11_0.5	BH11_1.5
Sampling date / time				28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-001	EM2507390-002	EM2507390-003	EM2507390-004	EM2507390-005
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH12_0.5	BH12_1.5	BH12_2.5	BH11_0.5	BH11_1.5
Sampling date / time					28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-001	EM2507390-002	EM2507390-003	EM2507390-004	EM2507390-005
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<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	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH12_0.5	BH12_1.5	BH12_2.5	BH11_0.5	BH11_1.5
Sampling date / time				28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-001	EM2507390-002	EM2507390-003	EM2507390-004	EM2507390-005	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<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	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<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	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<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	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	----	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	----	<0.0002	<0.0002	
EP066S: PCB Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH12_0.5	BH12_1.5	BH12_2.5	BH11_0.5	BH11_1.5
Sampling date / time					28-Apr-2025 00:00	28-Apr-2025 00:00	28-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-001	EM2507390-002	EM2507390-003	EM2507390-004	EM2507390-005
					Result	Result	Result	Result	Result
EP066S: PCB Surrogate - Continued									
Decachlorobiphenyl	2051-24-3	0.1	%		82.0	108	99.8	90.9	108
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		86.5	90.6	90.6	92.0	94.6
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		118	70.3	74.0	114	94.1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		84.8	88.0	86.6	91.7	89.4
2-Chlorophenol-D4	93951-73-6	0.5	%		75.3	77.3	76.0	81.1	77.7
2,4,6-Tribromophenol	118-79-6	0.5	%		74.7	71.8	70.0	74.0	72.6
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		90.9	92.0	94.2	97.3	96.4
Anthracene-d10	1719-06-8	0.5	%		102	99.8	104	108	104
4-Terphenyl-d14	1718-51-0	0.5	%		91.3	93.7	94.9	98.7	97.5
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		87.7	91.6	93.7	91.3	91.2
Toluene-D8	2037-26-5	0.2	%		93.8	96.4	95.3	95.8	94.7
4-Bromofluorobenzene	460-00-4	0.2	%		108	109	109	110	106
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		114	123	----	123	128
13C8-PFOA	----	0.0002	%		103	103	----	101	106



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH11_3.0	BH10_0.5	BH10_2.0	BH10_3.5	BH09_0.5
Sampling date / time					29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-006	EM2507390-007	EM2507390-008	EM2507390-009	EM2507390-010
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		3.2	14.2	1.2	1.2	11.4
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Synthetic Mineral Fibre	----	-	--		No	No	No	No	No
Organic Fibre	----	-	--		No	No	No	No	No
Sample weight (dry)	----	0.01	g		421	410	506	405	286
APPROVED IDENTIFIER:	----	-	--		M. TRAN	M. TRAN	M. TRAN	M. TRAN	M. TRAN
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		8	25	6	7	22
Copper	7440-50-8	5	mg/kg		<5	15	<5	<5	14
Lead	7439-92-1	5	mg/kg		<5	12	<5	<5	13
Nickel	7440-02-0	2	mg/kg		8	21	7	6	14
Zinc	7440-66-6	5	mg/kg		14	28	10	13	27
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH11_3.0	BH10_0.5	BH10_2.0	BH10_3.5	BH09_0.5
Sampling date / time				29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-006	EM2507390-007	EM2507390-008	EM2507390-009	EM2507390-010
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Total Chlordane (sum)	-----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
[^] Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Sum of DDD + DDE + DDT	72-54-8/72-55-9/5-0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH11_3.0	BH10_0.5	BH10_2.0	BH10_3.5	BH09_0.5
Sampling date / time				29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-006	EM2507390-007	EM2507390-008	EM2507390-009	EM2507390-010
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH11_3.0	BH10_0.5	BH10_2.0	BH10_3.5	BH09_0.5
Sampling date / time					29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-006	EM2507390-007	EM2507390-008	EM2507390-009	EM2507390-010
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH11_3.0	BH10_0.5	BH10_2.0	BH10_3.5	BH09_0.5
Sampling date / time					29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-006	EM2507390-007	EM2507390-008	EM2507390-009	EM2507390-010
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	<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	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH11_3.0	BH10_0.5	BH10_2.0	BH10_3.5	BH09_0.5
Sampling date / time				29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-006	EM2507390-007	EM2507390-008	EM2507390-009	EM2507390-010	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<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	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<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	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<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	<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	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<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	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP066S: PCB Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH11_3.0	BH10_0.5	BH10_2.0	BH10_3.5	BH09_0.5
Sampling date / time					29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-006	EM2507390-007	EM2507390-008	EM2507390-009	EM2507390-010
					Result	Result	Result	Result	Result
EP066S: PCB Surrogate - Continued									
Decachlorobiphenyl	2051-24-3	0.1	%		95.2	88.3	93.2	86.8	94.2
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		91.2	92.0	93.3	91.7	93.6
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		84.2	105	90.8	90.5	107
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		85.5	85.8	87.5	87.5	84.3
2-Chlorophenol-D4	93951-73-6	0.5	%		76.1	76.5	77.1	76.9	74.2
2,4,6-Tribromophenol	118-79-6	0.5	%		66.9	67.0	65.2	64.4	65.8
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		91.4	91.0	94.9	93.5	91.4
Anthracene-d10	1719-06-8	0.5	%		103	100	105	103	102
4-Terphenyl-d14	1718-51-0	0.5	%		93.7	95.3	98.7	96.8	93.0
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		93.0	98.8	88.7	94.1	89.0
Toluene-D8	2037-26-5	0.2	%		92.6	97.7	93.6	95.3	93.2
4-Bromofluorobenzene	460-00-4	0.2	%		105	111	105	107	107
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		116	118	124	108	109
13C8-PFOA	----	0.0002	%		98.9	97.9	98.7	88.0	90.9



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH09_1.5	BH09_3.0	BH08_0.5	BH08_1.5	BH08_3.0
Sampling date / time					29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-011	EM2507390-012	EM2507390-013	EM2507390-014	EM2507390-015
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		1.0	<1.0	12.3	1.8	1.4
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Synthetic Mineral Fibre	----	-	--		No	No	No	No	No
Organic Fibre	----	-	--		No	No	No	No	No
Sample weight (dry)	----	0.01	g		370	473	293	628	654
APPROVED IDENTIFIER:	----	-	--		M. TRAN	M. TRAN	M. TRAN	M. TRAN	M. TRAN
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		6	6	24	7	8
Copper	7440-50-8	5	mg/kg		<5	<5	15	<5	<5
Lead	7439-92-1	5	mg/kg		<5	<5	13	<5	<5
Nickel	7440-02-0	2	mg/kg		4	8	19	11	9
Zinc	7440-66-6	5	mg/kg		9	10	28	12	11
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH09_1.5	BH09_3.0	BH08_0.5	BH08_1.5	BH08_3.0
Sampling date / time				29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-011	EM2507390-012	EM2507390-013	EM2507390-014	EM2507390-015
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Total Chlordane (sum)	-----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
[^] Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Sum of DDD + DDE + DDT	72-54-8/72-55-9/5-0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH09_1.5	BH09_3.0	BH08_0.5	BH08_1.5	BH08_3.0
Sampling date / time				29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-011	EM2507390-012	EM2507390-013	EM2507390-014	EM2507390-015
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH09_1.5	BH09_3.0	BH08_0.5	BH08_1.5	BH08_3.0
Sampling date / time				29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-011	EM2507390-012	EM2507390-013	EM2507390-014	EM2507390-015
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH09_1.5	BH09_3.0	BH08_0.5	BH08_1.5	BH08_3.0
Sampling date / time					29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-011	EM2507390-012	EM2507390-013	EM2507390-014	EM2507390-015
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	<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	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH09_1.5	BH09_3.0	BH08_0.5	BH08_1.5	BH08_3.0
Sampling date / time				29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-011	EM2507390-012	EM2507390-013	EM2507390-014	EM2507390-015	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<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	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<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	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<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	<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	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<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	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP066S: PCB Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH09_1.5	BH09_3.0	BH08_0.5	BH08_1.5	BH08_3.0
Sampling date / time					29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-011	EM2507390-012	EM2507390-013	EM2507390-014	EM2507390-015
					Result	Result	Result	Result	Result
EP066S: PCB Surrogate - Continued									
Decachlorobiphenyl	2051-24-3	0.1	%		97.6	95.5	82.3	86.1	84.9
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		93.8	92.1	89.8	90.9	90.5
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		100	72.5	97.2	97.8	92.9
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		86.8	84.2	88.8	83.8	80.5
2-Chlorophenol-D4	93951-73-6	0.5	%		76.8	73.5	75.8	74.6	71.9
2,4,6-Tribromophenol	118-79-6	0.5	%		67.2	60.6	60.7	58.5	56.6
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		93.0	92.1	95.9	91.5	88.4
Anthracene-d10	1719-06-8	0.5	%		104	99.2	103	101	98.7
4-Terphenyl-d14	1718-51-0	0.5	%		94.2	94.5	93.0	95.3	91.7
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		94.5	89.3	87.0	91.9	94.4
Toluene-D8	2037-26-5	0.2	%		96.5	92.7	91.8	93.1	95.4
4-Bromofluorobenzene	460-00-4	0.2	%		108	103	104	107	107
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		122	118	121	120	122
13C8-PFOA	----	0.0002	%		99.1	102	97.2	105	101



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_0.5	BH07_1.5	BH07_3.0	Dup-02	Dup-01
Sampling date / time					30-Apr-2025 00:00	30-Apr-2025 00:00	30-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-016	EM2507390-017	EM2507390-018	EM2507390-019	EM2507390-020
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	-----	1.0	%		14.8	7.6	1.5	1.8	1.3
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-		No	No	No	No	No
Asbestos Type	1332-21-4	-	--		-	-	-	-	-
Synthetic Mineral Fibre	-----	-	--		No	No	No	No	No
Organic Fibre	-----	-	--		No	No	No	No	No
Sample weight (dry)	-----	0.01	g		372	498	585	492	420
APPROVED IDENTIFIER:	-----	-	--		M. TRAN	M. TRAN	M. TRAN	M. TRAN	M. TRAN
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		24	16	7	8	7
Copper	7440-50-8	5	mg/kg		17	6	<5	6	<5
Lead	7439-92-1	5	mg/kg		13	8	<5	<5	<5
Nickel	7440-02-0	2	mg/kg		18	7	7	11	7
Zinc	7440-66-6	5	mg/kg		32	18	10	14	11
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	-----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH07_0.5	BH07_1.5	BH07_3.0	Dup-02	Dup-01
Sampling date / time				30-Apr-2025 00:00	30-Apr-2025 00:00	30-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-016	EM2507390-017	EM2507390-018	EM2507390-019	EM2507390-020
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Total Chlordane (sum)	-----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
[^] Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
[^] Sum of DDD + DDE + DDT	72-54-8/72-55-9/5-0-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH07_0.5	BH07_1.5	BH07_3.0	Dup-02	Dup-01
Sampling date / time				30-Apr-2025 00:00	30-Apr-2025 00:00	30-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-016	EM2507390-017	EM2507390-018	EM2507390-019	EM2507390-020
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH07_0.5	BH07_1.5	BH07_3.0	Dup-02	Dup-01
Sampling date / time				30-Apr-2025 00:00	30-Apr-2025 00:00	30-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit	EM2507390-016	EM2507390-017	EM2507390-018	EM2507390-019	EM2507390-020
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_0.5	BH07_1.5	BH07_3.0	Dup-02	Dup-01
Sampling date / time					30-Apr-2025 00:00	30-Apr-2025 00:00	30-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-016	EM2507390-017	EM2507390-018	EM2507390-019	EM2507390-020
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	<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	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_0.5	BH07_1.5	BH07_3.0	Dup-02	Dup-01
Sampling date / time				30-Apr-2025 00:00	30-Apr-2025 00:00	30-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00	
Compound	CAS Number	LOR	Unit	EM2507390-016	EM2507390-017	EM2507390-018	EM2507390-019	EM2507390-020	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<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	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<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	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<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	<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	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<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	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP066S: PCB Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_0.5	BH07_1.5	BH07_3.0	Dup-02	Dup-01
Sampling date / time					30-Apr-2025 00:00	30-Apr-2025 00:00	30-Apr-2025 00:00	29-Apr-2025 00:00	29-Apr-2025 00:00
Compound	CAS Number	LOR	Unit		EM2507390-016	EM2507390-017	EM2507390-018	EM2507390-019	EM2507390-020
					Result	Result	Result	Result	Result
EP066S: PCB Surrogate - Continued									
Decachlorobiphenyl	2051-24-3	0.1	%		79.5	95.9	101	91.0	103
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		86.6	94.1	88.0	90.1	80.6
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		94.6	98.6	103	96.7	95.2
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		83.9	84.0	86.4	85.2	86.5
2-Chlorophenol-D4	93951-73-6	0.5	%		73.6	74.8	76.4	75.7	77.3
2,4,6-Tribromophenol	118-79-6	0.5	%		59.4	61.2	63.8	59.3	58.7
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		88.5	91.9	94.2	92.4	95.0
Anthracene-d10	1719-06-8	0.5	%		102	103	105	103	104
4-Terphenyl-d14	1718-51-0	0.5	%		91.3	95.0	96.2	95.3	98.7
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		87.4	87.0	93.2	91.4	93.6
Toluene-D8	2037-26-5	0.2	%		90.4	87.6	93.5	91.5	94.3
4-Bromofluorobenzene	460-00-4	0.2	%		103	98.2	104	103	104
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		120	127	116	115	121
13C8-PFOA	----	0.0002	%		100	104	98.5	101	96.2



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip Blank	Trip Spike	Trip Spike Control	----	----
Sampling date / time					17-Apr-2025 00:00	17-Apr-2025 00:00	17-Apr-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2507390-021	EM2507390-022	EM2507390-024	-----	-----
					Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		<1.0	16.8	4.4	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		<2	2	<2	----	----
Copper	7440-50-8	5	mg/kg		<5	<5	<5	----	----
Lead	7439-92-1	5	mg/kg		<5	<5	<5	----	----
Nickel	7440-02-0	2	mg/kg		<2	<2	<2	----	----
Zinc	7440-66-6	5	mg/kg		<5	<5	<5	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				Trip Blank	Trip Spike	Trip Spike Control	----	----
Sampling date / time				17-Apr-2025 00:00	17-Apr-2025 00:00	17-Apr-2025 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2507390-021	EM2507390-022	EM2507390-024	-----	-----
				Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5-0-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip Blank	Trip Spike	Trip Spike Control	----	----
Sampling date / time					17-Apr-2025 00:00	17-Apr-2025 00:00	17-Apr-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2507390-021	EM2507390-022	EM2507390-024	-----	-----
					Result	Result	Result	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued									
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
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	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip Blank	Trip Spike	Trip Spike Control	----	----
Sampling date / time					17-Apr-2025 00:00	17-Apr-2025 00:00	17-Apr-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2507390-021	EM2507390-022	EM2507390-024	-----	-----
					Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	15	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	26	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	14	----	----
>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	0.7	6.2	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	1.1	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	2.9	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	1.3	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	0.7	11.5	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	4.2	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		95.8	90.9	84.1	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		112	104	102	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip Blank	Trip Spike	Trip Spike Control	----	----
Sampling date / time					17-Apr-2025 00:00	17-Apr-2025 00:00	17-Apr-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EM2507390-021	EM2507390-022	EM2507390-024	-----	-----
					Result	Result	Result	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		120	129	117	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		84.3	80.2	82.6	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		75.0	75.4	76.3	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		63.7	77.0	73.9	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		88.8	80.8	80.8	----	----
Anthracene-d10	1719-06-8	0.5	%		120	111	123	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		104	103	107	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		89.0	70.6	87.9	----	----
Toluene-D8	2037-26-5	0.2	%		94.7	72.3	99.1	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		114	91.0	111	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				R1	----	----	----	----
Sampling date / time				30-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2507390-023	-----	-----	-----	-----
				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	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L	0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
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	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	R1	----	----	----	----
Sampling date / time					30-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2507390-023	-----	-----	-----	-----
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ 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	----	----	----	----
>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	----	----	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				R1	----	----	----	----
Sampling date / time				30-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM2507390-023	-----	-----	-----	-----
				Result	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	R1	----	----	----	----
Sampling date / time					30-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2507390-023	-----	-----	-----	-----
					Result	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		<0.01	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		<0.01	----	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		<0.01	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		24.7	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		52.3	----	----	----	----
2,4,6-Tribromophenol	118-79-6	1.0	%		43.0	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		63.3	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		80.5	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		80.3	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	R1	----	----	----	----
Sampling date / time					30-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM2507390-023	-----	-----	-----	-----
					Result	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		112	----	----	----	----
Toluene-D8	2037-26-5	2	%		108	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		112	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		126	----	----	----	----
13C8-PFOA	----	0.02	%		100	----	----	----	----

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	BH12_0.5 - 28-Apr-2025 00:00	Grey clay like soil.
EA200: Description	BH12_1.5 - 28-Apr-2025 00:00	Beige sandy soil.
EA200: Description	BH12_2.5 - 28-Apr-2025 00:00	Beige sandy soil.
EA200: Description	BH11_0.5 - 29-Apr-2025 00:00	Grey beige clay like soil.
EA200: Description	BH11_1.5 - 29-Apr-2025 00:00	Grey soil with organic matter.
EA200: Description	BH11_3.0 - 29-Apr-2025 00:00	Tan sandy soil.
EA200: Description	BH10_0.5 - 29-Apr-2025 00:00	Grey clay like soil.
EA200: Description	BH10_2.0 - 29-Apr-2025 00:00	Tan sandy soil.
EA200: Description	BH10_3.5 - 29-Apr-2025 00:00	Tan sandy soil.
EA200: Description	BH09_0.5 - 29-Apr-2025 00:00	Grey clay like soil.
EA200: Description	BH09_1.5 - 29-Apr-2025 00:00	Beige sandy soil.
EA200: Description	BH09_3.0 - 29-Apr-2025 00:00	Tan sandy soil.
EA200: Description	BH08_0.5 - 29-Apr-2025 00:00	Grey clay like soil.
EA200: Description	BH08_1.5 - 29-Apr-2025 00:00	Beige sandy soil.
EA200: Description	BH08_3.0 - 29-Apr-2025 00:00	Tan sandy soil.
EA200: Description	BH07_0.5 - 30-Apr-2025 00:00	Grey clay like soil.
EA200: Description	BH07_1.5 - 30-Apr-2025 00:00	Grey tan clay like soil.
EA200: Description	BH07_3.0 - 30-Apr-2025 00:00	Tan sandy soil.
EA200: Description	Dup-02 - 29-Apr-2025 00:00	Grey clay like soil.
EA200: Description	Dup-01 - 29-Apr-2025 00:00	Tan sandy soil.



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	36	140
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	62	128
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	40	139
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2,4,6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124
EP231S: PFAS Surrogate			
13C4-PFOS	----	68	136
13C8-PFOA	----	69	133

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	51
2-Chlorophenol-D4	93951-73-6	30	114
2,4,6-Tribromophenol	118-79-6	26	133
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	35	127
Anthracene-d10	1719-06-8	44	122
4-Terphenyl-d14	1718-51-0	44	124
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129
EP231S: PFAS Surrogate			
13C4-PFOS	----	65	140
13C8-PFOA	----	71	133

Page : 43 of 43
Work Order : EM2507390
Client : GHD PTY LTD
Project : 12537654





QUALITY CONTROL REPORT

Work Order : **EM2507390**

Page : 1 of 27

Client : **GHD PTY LTD**

Laboratory : Environmental Division Melbourne

Contact : Meg Turner

Contact : Peter Ravlic

Address : LEVEL 8, 180 LONSDALE ST
MELBOURNE VIC, AUSTRALIA 3001

Address : 4 Westall Rd Springvale VIC Australia 3171

Telephone : ----

Telephone : +6138549 9645

Project : 12537654

Date Samples Received : 01-May-2025

Order number : ----

Date Analysis Commenced : 02-May-2025

C-O-C number : ----

Issue Date : 07-May-2025

Sampler : Meg Turner

Site :

Quote number : EN/000

No. of samples received : 24

No. of samples analysed : 24



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
Dilani Fernando	Laboratory Coordinator	Melbourne Inorganics, Springvale, VIC
MINNIE TRAN	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC



General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

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

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

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: 6551219)									
EM2507390-001	BH12_0.5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	20	20	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	16	15	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	13	14	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	11	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	25	25	0.0	No Limit
EM2507390-010	BH09_0.5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	22	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	14	14	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	14	13	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	13	13	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	27	27	0.0	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6551221)									
EM2507391-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	17	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	9	12.1	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



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: 6551221) - continued									
EM2507391-001	Anonymous	EG005T: Zinc	7440-66-6	5	mg/kg	<5	6	0.0	No Limit
EM2507391-010	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	9	10	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	5	17.2	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	10	10	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	33	34	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	54	50	7.0	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6551367)									
EM2507302-088	Anonymous	EA055: Moisture Content	----	0.1	%	2.9	2.4	19.7	0% - 20%
EM2507302-107	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	13.8	13.5	2.1	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6551368)									
EM2507390-008	BH10_2.0	EA055: Moisture Content	----	0.1 (1.0)*	%	1.2	1.3	9.0	No Limit
EM2507390-018	BH07_3.0	EA055: Moisture Content	----	0.1 (1.0)*	%	1.5	1.7	11.4	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6551220)									
EM2507390-001	BH12_0.5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2507390-010	BH09_0.5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6551222)									
EM2507391-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2507391-010	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6550838)									
EM2507390-021	Trip Blank	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6551158)									
EM2507390-001	BH12_0.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2507390-011	BH09_1.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6550835)									
EM2507390-021	Trip Blank	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6550835) - continued									
EM2507390-021	Trip Blank	EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6551157)									
EM2507390-001	BH12_0.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EM2507390-011	BH09_1.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6551157) - continued									
EM2507390-011	BH09_1.5	EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6550835)									
EM2507390-021	Trip Blank	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6551157)							
EM2507390-001	BH12_0.5	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6550837) - continued									
EM2507390-021	Trip Blank	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			205-82-3						
		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)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6551156)									
EM2507390-001	BH12_0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			205-82-3						
		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
EM2507390-011	BH09_1.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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: 6551156) - continued									
EM2507390-011	BH09_1.5	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			205-82-3						
		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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6550549)									
EM2507390-001	BH12_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EM2507390-011	BH09_1.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6550550)									
EM2507390-021	Trip Blank	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6550836)									
EM2507390-021	Trip Blank	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: 6551155)									
EM2507390-001	BH12_0.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EM2507390-011	BH09_1.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6550549)									
EM2507390-001	BH12_0.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EM2507390-011	BH09_1.5	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: 6550550)									
EM2507390-021	Trip Blank	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: 6550836)									
EM2507390-021	Trip Blank	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6550836) - continued									
EM2507390-021	Trip Blank	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: 6551155)									
EM2507390-001	BH12_0.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EM2507390-011	BH09_1.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 6550549)									
EM2507390-001	BH12_0.5	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM2507390-011	BH09_1.5	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		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: 6550550)									
EM2507390-021	Trip Blank	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	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		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: 6551264)									
EM2507390-001	BH12_0.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



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 (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6551264) - continued									
EM2507390-001	BH12_0.5	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EM2507390-012	BH09_3.0	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: 6551264)									
EM2507390-001	BH12_0.5	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	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
EM2507390-012	BH09_3.0	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 (PFTTrDA)	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: 6551264)									
EM2507390-001	BH12_0.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



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: 6551264) - continued									
EM2507390-001	BH12_0.5	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
EM2507390-012	BH09_3.0	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6551264)									
EM2507390-001	BH12_0.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EM2507390-012	BH09_3.0	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
EP231P: PFAS Sums (QC Lot: 6551264)									
EM2507390-001	BH12_0.5	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	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 (%)
EP231P: PFAS Sums (QC Lot: 6551264) - continued									
EM2507390-012	BH09_3.0	EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	<0.0002	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 (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 6548675)									
ET2502364-007	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	0.002	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	0.008	0.007	0.0	No Limit
EM2507392-001	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	0.003	0.003	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	0.003	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	<0.005	<0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 6548673)									
EM2507288-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0001	0.0	No Limit
EM2507392-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6551396)									
EM2507461-002	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EM2507402-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6551396)									
EM2507461-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EM2507402-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 6551396)									
EM2507461-002	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

Page : 13 of 27
 Work Order : EM2507390
 Client : GHD PTY LTD
 Project : 12537654



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: 6551396) - continued									
EM2507461-002	Anonymous	EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EM2507402-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	3	2	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	3	3	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	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	13	10	30.1	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**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6551219)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	103	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	67.4	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	105	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	96.4	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	90.6	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	94.6	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	77.3	70.0	130
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6551221)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	98.1	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	64.1	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	102	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	93.4	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	85.8	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	91.3	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	77.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6551220)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	93.8	69.0	128
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6551222)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	86.9	69.0	128
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6550838)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	122	68.0	133
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6551158)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	123	68.0	133
EP068A: Organochlorine Pesticides (OC) (QCLot: 6550835)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	107	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	104	70.0	124
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	100	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	110	69.2	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	111	66.6	122



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 6550835) - continued								
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	103	67.2	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	109	66.0	126
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	112	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	111	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	112	68.0	122
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	111	68.9	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	117	55.8	130
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	111	67.9	124
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	114	72.0	127
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	112	62.4	131
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	94.2	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	95.4	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	95.1	55.5	132
EP068A: Organochlorine Pesticides (OC) (QCLot: 6551157)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	106	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	102	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	106	70.0	124
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	108	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	69.2	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	103	66.6	122
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	68.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	104	67.2	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	105	66.0	126
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	104	68.0	122
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.9	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.7	55.8	130
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	67.9	124
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	105	72.0	127
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	108	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	62.4	131



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 6551157) - continued								
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	99.1	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	98.6	55.5	132
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6550835)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	65.6	127
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	63.0	129
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	57.7	10.0	136
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.7	58.3	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	122
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	103	68.0	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	94.2	59.6	124
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	93.5	63.8	128
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	110	71.1	124
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	106	67.4	126
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	98.5	57.9	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	104	66.2	123
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	59.8	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	106	65.4	127
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	102	52.1	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.2	122
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	63.2	124
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.1	65.9	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	119	43.1	131
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6551157)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	103	65.6	127
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	63.0	129
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	76.7	10.0	136
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	103	58.3	128
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	69.0	122
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	101	68.0	122
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	98.8	59.6	124
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	106	63.8	128
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	71.1	124
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	105	67.4	126



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6551157) - continued								
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	95.5	57.9	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	100	66.2	123
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	100	59.8	123
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	65.4	127
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	100	52.1	128
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.2	122
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	100	63.2	124
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	104	65.9	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	88.5	43.1	131
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6550837)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	97.5	85.7	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	92.1	81.0	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	96.7	83.6	120
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	92.8	81.3	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	98.1	79.4	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	97.7	81.7	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	102	78.3	124
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	104	79.9	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	96.1	76.9	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	109	80.9	130
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	3 mg/kg	80.0	70.0	121
	205-82-3							
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	110	80.4	130
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	96.3	70.2	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	101	67.9	122
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	95.0	65.8	123
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	96.4	65.8	127
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6551156)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	94.7	85.7	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	96.6	81.0	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	93.7	83.6	120
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	93.4	81.3	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	94.9	79.4	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	92.4	81.7	127



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6551156) - continued								
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	93.4	78.3	124
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	92.8	79.9	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	90.4	76.9	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	96.9	80.9	130
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	92.9	70.0	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	97.9	80.4	130
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	88.9	70.2	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	89.6	67.9	122
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	85.1	65.8	123
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	88.0	65.8	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6550549)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	95.7	58.6	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6550550)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	102	58.6	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6550836)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	810 mg/kg	98.5	80.0	120
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	2880 mg/kg	98.9	80.0	120
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1460 mg/kg	99.4	80.0	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6551155)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	810 mg/kg	90.9	80.0	120
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	2880 mg/kg	90.0	80.0	120
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1460 mg/kg	92.2	80.0	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6550549)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	93.1	59.3	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6550550)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	98.7	59.3	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6550836)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1120 mg/kg	101	80.0	120
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	3800 mg/kg	97.0	80.0	120
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	260 mg/kg	110	80.0	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6551155)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1120 mg/kg	91.2	80.0	120
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	3800 mg/kg	90.8	80.0	120



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6551155) - continued								
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	260 mg/kg	94.0	80.0	120
EP080: BTEXN (QCLot: 6550549)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	92.9	61.6	117
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	94.4	65.8	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	93.0	65.8	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	97.3	64.8	134
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	101	68.7	132
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	96.3	61.8	123
EP080: BTEXN (QCLot: 6550550)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	92.5	61.6	117
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	97.5	65.8	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	97.6	65.8	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	106	64.8	134
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	109	68.7	132
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	112	61.8	123
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6551264)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00111 mg/kg	105	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	103	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00114 mg/kg	94.3	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	112	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	114	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00121 mg/kg	118	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6551264)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	91.9	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.2	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.3	66.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6551264) - continued								
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6551264)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	107	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.9	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6551264)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	108	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00119 mg/kg	97.1	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	111	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00121 mg/kg	116	70.0	130
EP231P: PFAS Sums (QCLot: 6551264)								
EP231X: Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231X: Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) LowHigh	
Method: Compound	CAS Number	LOR	Unit	Result				
EG020F: Dissolved Metals by ICP-MS (QCLot: 6548675)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	100	89.0	111
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	95.8	83.5	111
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	98.9	83.2	109
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	97.7	83.1	107
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.5	84.6	108
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	96.2	84.3	110
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	101	86.3	112
EG035F: Dissolved Mercury by FIMS (QCLot: 6548673)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	108	71.6	116



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6548541)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	82.0	42.8	114
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	85.6	48.6	119
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	85.5	47.0	117
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	88.7	49.5	119
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	91.4	49.4	121
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	90.3	48.4	122
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	100	50.3	124
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	102	50.0	126
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	95.0	49.4	127
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	111	48.7	126
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	93.2	54.5	134
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	97.8	56.1	134
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	94.3	55.6	135
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	89.6	54.4	126
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	97.0	54.5	126
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	90.3	54.4	126
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6548542)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	4421 µg/L	83.9	47.2	122
EP071: C15 - C28 Fraction	----	100	µg/L	<100	15219 µg/L	90.1	52.9	131
EP071: C29 - C36 Fraction	----	50	µg/L	<50	7904 µg/L	86.3	50.4	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6551396)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	360 µg/L	102	66.2	134
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6548542)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	6085 µg/L	88.7	49.1	125
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	20300 µg/L	88.5	51.6	128
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	1456 µg/L	86.2	47.2	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6551396)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	450 µg/L	99.9	66.2	132
EP080: BTEXN (QCLot: 6551396)								
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	102	68.8	127
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	115	72.9	129
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	103	71.7	130
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	106	72.3	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP080: BTEXN (QCLot: 6551396) - continued								
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	108	75.9	134
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	95.0	68.3	131
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6551743)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.222 µg/L	90.9	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.235 µg/L	96.4	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.228 µg/L	89.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.238 µg/L	92.3	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.232 µg/L	115	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.241 µg/L	108	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6551743)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	90.1	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	95.5	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	90.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.9	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	96.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	82.5	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	95.4	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	90.7	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	100	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	100	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6551743)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	89.3	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	93.8	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	99.4	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	88.7	70.0	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	89.4	70.0	130
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.3	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	92.9	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6551743)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.234 µg/L	89.4	63.0	143

Matrix Spike (MS) Report

Sub-Matrix: SOIL

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6551219)							
EM2507390-002	BH12_1.5	EG005T: Arsenic	7440-38-2	50 mg/kg	107	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	100	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	101	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	104	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	102	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	102	80.0	120
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6551221)							
EM2507391-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	113	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	106	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	103	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	103	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	109	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	105	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	108	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6551220)							
EM2507390-002	BH12_1.5	EG035T: Mercury	7439-97-6	0.5 mg/kg	104	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6551222)							
EM2507391-002	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	87.2	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6550838)							

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6550838) - continued							
EM2507390-024	Trip Spike Control	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	116	63.2	144
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6551158)							
EM2507390-003	BH12_2.5	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	113	63.2	144
EP068A: Organochlorine Pesticides (OC) (QCLot: 6550835)							
EM2507390-022	Trip Spike	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	98.4	51.4	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	98.8	49.1	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	103	38.4	135
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	58.4	136
		EP068: Endrin	72-20-8	0.5 mg/kg	111	33.0	146
		EP068: 4.4'-DDT	50-29-3	0.5 mg/kg	76.9	20.0	133
EP068A: Organochlorine Pesticides (OC) (QCLot: 6551157)							
EM2507390-002	BH12_1.5	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	99.5	51.4	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	91.4	49.1	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	99.9	38.4	135
		EP068: Dieldrin	60-57-1	0.5 mg/kg	103	58.4	136
		EP068: Endrin	72-20-8	0.5 mg/kg	75.5	33.0	146
		EP068: 4.4'-DDT	50-29-3	0.5 mg/kg	78.1	20.0	133
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6550835)							
EM2507390-022	Trip Spike	EP068: Diazinon	333-41-5	0.5 mg/kg	89.2	65.1	135
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	89.0	56.3	127
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	89.0	55.0	133
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	86.5	55.1	133
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	76.8	43.8	128
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6551157)							
EM2507390-002	BH12_1.5	EP068: Diazinon	333-41-5	0.5 mg/kg	93.7	65.1	135
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	84.9	56.3	127
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	85.1	55.0	133
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	94.9	55.1	133
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	93.4	43.8	128
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6550837)							
EM2507390-024	Trip Spike Control	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	97.0	77.2	116
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	107	65.5	136
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6551156)							
EM2507390-003	BH12_2.5	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	89.5	77.2	116
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	93.3	65.5	136
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6550549)							

Page : 25 of 27
 Work Order : EM2507390
 Client : GHD PTY LTD
 Project : 12537654



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: 6550549) - continued							
EM2507390-002	BH12_1.5	EP080: C6 - C9 Fraction	----	28 mg/kg	66.8	33.4	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6550550)							
EM2507390-022	Trip Spike	EP080: C6 - C9 Fraction	----	28 mg/kg	76.6	33.4	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6550836)							
EM2507390-022	Trip Spike	EP071: C10 - C14 Fraction	----	810 mg/kg	96.3	70.0	130
		EP071: C15 - C28 Fraction	----	2880 mg/kg	97.0	70.0	130
		EP071: C29 - C36 Fraction	----	1460 mg/kg	97.4	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6551155)							
EM2507390-002	BH12_1.5	EP071: C10 - C14 Fraction	----	810 mg/kg	92.5	70.0	130
		EP071: C15 - C28 Fraction	----	2880 mg/kg	92.5	70.0	130
		EP071: C29 - C36 Fraction	----	1460 mg/kg	95.3	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6550549)							
EM2507390-002	BH12_1.5	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	66.1	30.8	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6550550)							
EM2507390-022	Trip Spike	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	78.0	30.8	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6550836)							
EM2507390-022	Trip Spike	EP071: >C10 - C16 Fraction	----	1120 mg/kg	98.9	70.0	130
		EP071: >C16 - C34 Fraction	----	3800 mg/kg	95.1	70.0	130
		EP071: >C34 - C40 Fraction	----	260 mg/kg	107	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6551155)							
EM2507390-002	BH12_1.5	EP071: >C10 - C16 Fraction	----	1120 mg/kg	93.3	70.0	130
		EP071: >C16 - C34 Fraction	----	3800 mg/kg	93.6	70.0	130
		EP071: >C34 - C40 Fraction	----	260 mg/kg	97.8	70.0	130
EP080: BTEXN (QCLot: 6550549)							
EM2507390-002	BH12_1.5	EP080: Benzene	71-43-2	2 mg/kg	80.1	54.4	127
		EP080: Toluene	108-88-3	2 mg/kg	86.3	57.1	131
EP080: BTEXN (QCLot: 6550550)							
EM2507390-022	Trip Spike	EP080: Benzene	71-43-2	2 mg/kg	85.0	54.4	127
		EP080: Toluene	108-88-3	2 mg/kg	102	57.1	131
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6551264)							
EM2507390-002	BH12_1.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00111 mg/kg	109	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00118 mg/kg	86.7	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00114 mg/kg	100	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	107	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	103	68.0	136



Sub-Matrix: SOIL				Matrix Spike (MS) Report				
				Spike	SpikeRecovery(%)	Acceptable Limits (%)		
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6551264) - continued								
EM2507390-002	BH12_1.5	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00121 mg/kg	110	59.0	134	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6551264)								
EM2507390-002	BH12_1.5	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	106	71.0	135	
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	106	69.0	132	
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132	
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	93.4	71.0	131	
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	111	69.0	133	
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	107	72.0	129	
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	80.7	69.0	133	
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	111	64.0	136	
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	111	69.0	135	
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	102	66.0	139	
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	110	69.0	133	
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6551264)								
EM2507390-002	BH12_1.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	99.4	67.0	137	
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	109	70.0	130	
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	118	70.0	130	
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	102	70.0	130	
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	103	70.0	130	
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	101	63.0	144	
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	93.1	61.0	139	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6551264)								
EM2507390-002	BH12_1.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	116	62.0	145	
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00119 mg/kg	102	64.0	140	
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	108	65.0	137	
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00121 mg/kg	84.5	70.0	130	
Sub-Matrix: WATER				Matrix Spike (MS) Report				
Laboratory sample ID		Sample ID	Method: Compound	CAS Number	Spike	SpikeRecovery(%)	Acceptable Limits (%)	
					Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 6548675)								
EM2507390-023	R1	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	88.5	76.6	124	
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	91.6	74.6	118	
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	91.7	71.0	135	

Page : 27 of 27
 Work Order : EM2507390
 Client : GHD PTY LTD
 Project : 12537654



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 6548675) - continued							
EM2507390-023	R1	EG020A-F: Copper	7440-50-8	0.2 mg/L	96.0	76.0	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	94.7	75.0	133
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	96.2	73.0	131
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	98.4	75.0	131
EG035F: Dissolved Mercury by FIMS (QCLot: 6548673)							
EM2507288-002	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	75.9	70.0	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6551396)							
EM2507402-003	Anonymous	EP080: C6 - C9 Fraction	----	280 µg/L	94.0	33.9	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6551396)							
EM2507402-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	330 µg/L	91.9	34.0	122
EP080: BTEXN (QCLot: 6551396)							
EM2507402-003	Anonymous	EP080: Benzene	71-43-2	20 µg/L	95.4	56.3	133
		EP080: Toluene	108-88-3	20 µg/L	110	60.4	132



QA/QC Compliance Assessment to assist with Quality Review

Work Order : EM2507390

Page : 1 of 18

Client : GHD PTY LTD

Laboratory : Environmental Division Melbourne

Contact : Meg Turner

Telephone : +6138549 9645

Project : 12537654

Date Samples Received : 01-May-2025

Site :

Issue Date : 07-May-2025

Sampler : Meg Turner

No. of samples received : 24

Order number : ----

No. of samples analysed : 24

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C)						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	----	----	----	05-May-2025	01-May-2025	4
EP066: Polychlorinated Biphenyls (PCB)						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	----	----	----
EP068A: Organochlorine Pesticides (OC)						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	----	----	----
EP068B: Organophosphorus Pesticides (OP)						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	----	----	----
EP080/071: Total Petroleum Hydrocarbons						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	05-May-2025	01-May-2025	4
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	05-May-2025	01-May-2025	4
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	----	----	----
EP080: BTEXN						
Soil Glass Jar - Unpreserved Trip Blank, Trip Spike, Trip Spike Control	05-May-2025	01-May-2025	4	05-May-2025	01-May-2025	4

Outliers : Frequency of Quality Control Samples



Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	9	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	9	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)									
Soil Glass Jar - Unpreserved (EA055) Trip Blank, Trip Spike Control		Trip Spike,	17-Apr-2025	----	----	----	05-May-2025	01-May-2025	✖
Soil Glass Jar - Unpreserved (EA055) BH12_0.5, BH12_2.5		BH12_1.5,	28-Apr-2025	----	----	----	05-May-2025	12-May-2025	✔
Soil Glass Jar - Unpreserved (EA055) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,		BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	----	----	----	05-May-2025	13-May-2025	✔
Soil Glass Jar - Unpreserved (EA055) BH07_0.5, BH07_3.0		BH07_1.5,	30-Apr-2025	----	----	----	05-May-2025	14-May-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) BH12_0.5, BH12_2.5	BH12_1.5,	28-Apr-2025	----	----	----	05-May-2025	25-Oct-2025	✓
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,	BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	----	----	----	05-May-2025	26-Oct-2025	✓
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) BH07_0.5, BH07_3.0	BH07_1.5,	30-Apr-2025	----	----	----	05-May-2025	27-Oct-2025	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) Trip Blank, Trip Spike Control	Trip Spike,	17-Apr-2025	06-May-2025	14-Oct-2025	✓	06-May-2025	14-Oct-2025	✓
Soil Glass Jar - Unpreserved (EG005T) BH12_0.5, BH12_2.5	BH12_1.5,	28-Apr-2025	06-May-2025	25-Oct-2025	✓	06-May-2025	25-Oct-2025	✓
Soil Glass Jar - Unpreserved (EG005T) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,	BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	06-May-2025	26-Oct-2025	✓	06-May-2025	26-Oct-2025	✓
Soil Glass Jar - Unpreserved (EG005T) BH07_0.5, BH07_3.0	BH07_1.5,	30-Apr-2025	06-May-2025	27-Oct-2025	✓	06-May-2025	27-Oct-2025	✓



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG035T: Total Recoverable Mercury by FIMS									
Soil Glass Jar - Unpreserved (EG035T) Trip Blank, Trip Spike Control		Trip Spike,	17-Apr-2025	06-May-2025	15-May-2025	✔	07-May-2025	15-May-2025	✔
Soil Glass Jar - Unpreserved (EG035T) BH12_0.5, BH12_2.5		BH12_1.5,	28-Apr-2025	06-May-2025	26-May-2025	✔	07-May-2025	26-May-2025	✔
Soil Glass Jar - Unpreserved (EG035T) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,		BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	06-May-2025	27-May-2025	✔	07-May-2025	27-May-2025	✔
Soil Glass Jar - Unpreserved (EG035T) BH07_0.5, BH07_3.0		BH07_1.5,	30-Apr-2025	06-May-2025	28-May-2025	✔	07-May-2025	28-May-2025	✔
EP066: Polychlorinated Biphenyls (PCB)									
Soil Glass Jar - Unpreserved (EP066) Trip Blank, Trip Spike Control		Trip Spike,	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP066) BH12_0.5, BH12_2.5		BH12_1.5,	28-Apr-2025	05-May-2025	12-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP066) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, Dup-02,		BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, Dup-01	29-Apr-2025	05-May-2025	13-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP066) BH09_3.0, BH08_1.5,		BH08_0.5, BH08_3.0	29-Apr-2025	05-May-2025	13-May-2025	✔	07-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP066) BH07_3.0			30-Apr-2025	05-May-2025	14-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP066) BH07_0.5,		BH07_1.5	30-Apr-2025	05-May-2025	14-May-2025	✔	07-May-2025	14-Jun-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP068A: Organochlorine Pesticides (OC)									
Soil Glass Jar - Unpreserved (EP068) Trip Blank, Trip Spike Control		Trip Spike,	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP068) BH12_0.5, BH12_2.5		BH12_1.5,	28-Apr-2025	05-May-2025	12-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP068) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,		BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	05-May-2025	13-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP068) BH07_0.5, BH07_3.0		BH07_1.5,	30-Apr-2025	05-May-2025	14-May-2025	✔	06-May-2025	14-Jun-2025	✔
EP068B: Organophosphorus Pesticides (OP)									
Soil Glass Jar - Unpreserved (EP068) Trip Blank, Trip Spike Control		Trip Spike,	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP068) BH12_0.5, BH12_2.5		BH12_1.5,	28-Apr-2025	05-May-2025	12-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP068) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,		BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	05-May-2025	13-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP068) BH07_0.5, BH07_3.0		BH07_1.5,	30-Apr-2025	05-May-2025	14-May-2025	✔	06-May-2025	14-Jun-2025	✔



Matrix: SOIL Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) Trip Blank, Trip Spike Control	Trip Spike,	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH12_0.5, BH12_2.5	BH12_1.5,	28-Apr-2025	05-May-2025	12-May-2025	✓	06-May-2025	14-Jun-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,	BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	05-May-2025	13-May-2025	✓	06-May-2025	14-Jun-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) BH07_0.5, BH07_3.0	BH07_1.5,	30-Apr-2025	05-May-2025	14-May-2025	✓	06-May-2025	14-Jun-2025	✓



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) Trip Blank	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP080) Trip Blank	17-Apr-2025	05-May-2025	01-May-2025	✖	05-May-2025	01-May-2025	✖
Soil Glass Jar - Unpreserved (EP071) Trip Spike	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP080) Trip Spike	17-Apr-2025	05-May-2025	01-May-2025	✖	05-May-2025	01-May-2025	✖
Soil Glass Jar - Unpreserved (EP071) Trip Spike Control	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP080) Trip Spike Control	17-Apr-2025	05-May-2025	01-May-2025	✖	05-May-2025	01-May-2025	✖
Soil Glass Jar - Unpreserved (EP080) BH12_0.5, BH12_2.5	BH12_1.5, 28-Apr-2025	05-May-2025	12-May-2025	✔	05-May-2025	12-May-2025	✔
Soil Glass Jar - Unpreserved (EP071) BH12_0.5, BH12_2.5	BH12_1.5, 28-Apr-2025	05-May-2025	12-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP080) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,	BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01, 29-Apr-2025	05-May-2025	13-May-2025	✔	05-May-2025	13-May-2025	✔
Soil Glass Jar - Unpreserved (EP071) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,	BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01, 29-Apr-2025	05-May-2025	13-May-2025	✔	06-May-2025	14-Jun-2025	✔
Soil Glass Jar - Unpreserved (EP080) BH07_0.5, BH07_3.0	BH07_1.5, 30-Apr-2025	05-May-2025	14-May-2025	✔	05-May-2025	14-May-2025	✔
Soil Glass Jar - Unpreserved (EP071) BH07_0.5, BH07_3.0	BH07_1.5, 30-Apr-2025	05-May-2025	14-May-2025	✔	06-May-2025	14-Jun-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP071) Trip Blank	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✓	
Soil Glass Jar - Unpreserved (EP080) Trip Blank	17-Apr-2025	05-May-2025	01-May-2025	✖	05-May-2025	01-May-2025	✖	
Soil Glass Jar - Unpreserved (EP071) Trip Spike	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✓	
Soil Glass Jar - Unpreserved (EP080) Trip Spike	17-Apr-2025	05-May-2025	01-May-2025	✖	05-May-2025	01-May-2025	✖	
Soil Glass Jar - Unpreserved (EP071) Trip Spike Control	17-Apr-2025	05-May-2025	01-May-2025	✖	06-May-2025	14-Jun-2025	✓	
Soil Glass Jar - Unpreserved (EP080) Trip Spike Control	17-Apr-2025	05-May-2025	01-May-2025	✖	05-May-2025	01-May-2025	✖	
Soil Glass Jar - Unpreserved (EP080) BH12_0.5, BH12_2.5	BH12_1.5,	28-Apr-2025	05-May-2025	12-May-2025	✓	05-May-2025	12-May-2025	✓
Soil Glass Jar - Unpreserved (EP071) BH12_0.5, BH12_2.5	BH12_1.5,	28-Apr-2025	05-May-2025	12-May-2025	✓	06-May-2025	14-Jun-2025	✓
Soil Glass Jar - Unpreserved (EP080) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,	BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	05-May-2025	13-May-2025	✓	05-May-2025	13-May-2025	✓
Soil Glass Jar - Unpreserved (EP071) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,	BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	05-May-2025	13-May-2025	✓	06-May-2025	14-Jun-2025	✓
Soil Glass Jar - Unpreserved (EP080) BH07_0.5, BH07_3.0	BH07_1.5,	30-Apr-2025	05-May-2025	14-May-2025	✓	05-May-2025	14-May-2025	✓
Soil Glass Jar - Unpreserved (EP071) BH07_0.5, BH07_3.0	BH07_1.5,	30-Apr-2025	05-May-2025	14-May-2025	✓	06-May-2025	14-Jun-2025	✓



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080: BTEXN									
Soil Glass Jar - Unpreserved (EP080) Trip Blank, Trip Spike Control		Trip Spike,	17-Apr-2025	05-May-2025	01-May-2025	✖	05-May-2025	01-May-2025	✖
Soil Glass Jar - Unpreserved (EP080) BH12_0.5, BH12_2.5		BH12_1.5,	28-Apr-2025	05-May-2025	12-May-2025	✔	05-May-2025	12-May-2025	✔
Soil Glass Jar - Unpreserved (EP080) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,		BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	05-May-2025	13-May-2025	✔	05-May-2025	13-May-2025	✔
Soil Glass Jar - Unpreserved (EP080) BH07_0.5, BH07_3.0		BH07_1.5,	30-Apr-2025	05-May-2025	14-May-2025	✔	05-May-2025	14-May-2025	✔
EP231A: Perfluoroalkyl Sulfonic Acids									
HDPE Soil Jar (EP231X) BH12_0.5,		BH12_1.5	28-Apr-2025	05-May-2025	25-Oct-2025	✔	06-May-2025	14-Jun-2025	✔
HDPE Soil Jar (EP231X) BH11_0.5, BH11_3.0, BH10_2.0, BH09_0.5, BH09_3.0, BH08_1.5, Dup-02,		BH11_1.5, BH10_0.5, BH10_3.5, BH09_1.5, BH08_0.5, BH08_3.0, Dup-01	29-Apr-2025	05-May-2025	26-Oct-2025	✔	06-May-2025	14-Jun-2025	✔
HDPE Soil Jar (EP231X) BH07_0.5, BH07_3.0		BH07_1.5,	30-Apr-2025	05-May-2025	27-Oct-2025	✔	06-May-2025	14-Jun-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) BH12_0.5,								



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X)								
BH12_0.5,	BH12_1.5	28-Apr-2025	05-May-2025	25-Oct-2025	✓	06-May-2025	14-Jun-2025	✓
HDPE Soil Jar (EP231X)								
BH11_0.5,	BH11_1.5,	29-Apr-2025	05-May-2025	26-Oct-2025	✓	06-May-2025	14-Jun-2025	✓
BH11_3.0,	BH10_0.5,							
BH10_2.0,	BH10_3.5,							
BH09_0.5,	BH09_1.5,							
BH09_3.0,	BH08_0.5,							
BH08_1.5,	BH08_3.0,							
Dup-02,	Dup-01							
HDPE Soil Jar (EP231X)								
BH07_0.5,	BH07_1.5,	30-Apr-2025	05-May-2025	27-Oct-2025	✓	06-May-2025	14-Jun-2025	✓
BH07_3.0								

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		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) R1	30-Apr-2025	----	----	----	02-May-2025	27-Oct-2025	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F) R1	30-Apr-2025	----	----	----	02-May-2025	28-May-2025	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) R1	30-Apr-2025	05-May-2025	07-May-2025	✓	06-May-2025	14-Jun-2025	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) R1	30-Apr-2025	05-May-2025	07-May-2025	✓	06-May-2025	14-Jun-2025	✓
Amber VOC Vial - Sulfuric Acid (EP080) R1	30-Apr-2025	05-May-2025	14-May-2025	✓	05-May-2025	14-May-2025	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) R1	30-Apr-2025	05-May-2025	07-May-2025	✓	06-May-2025	14-Jun-2025	✓
Amber VOC Vial - Sulfuric Acid (EP080) R1	30-Apr-2025	05-May-2025	14-May-2025	✓	05-May-2025	14-May-2025	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) R1	30-Apr-2025	05-May-2025	14-May-2025	✓	05-May-2025	14-May-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) R1	30-Apr-2025	05-May-2025	27-Oct-2025	✓	05-May-2025	27-Oct-2025	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) R1	30-Apr-2025	05-May-2025	27-Oct-2025	✔	05-May-2025	27-Oct-2025	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) R1	30-Apr-2025	05-May-2025	27-Oct-2025	✔	05-May-2025	27-Oct-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) R1	30-Apr-2025	05-May-2025	27-Oct-2025	✔	05-May-2025	27-Oct-2025	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) R1	30-Apr-2025	05-May-2025	27-Oct-2025	✔	05-May-2025	27-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	3	23	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	3	23	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	3	23	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	39	10.26	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	3	23	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	23	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	39	5.13	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	40	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	23	8.70	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

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

Matrix: **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	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	17	11.76	10.00	✔	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	4	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	9	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	11	18.18	10.00	✔	NEPM 2013 B3 & ALS QC Standard

Laboratory Control Samples (LCS)

Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	17	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	4	25.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	9.09	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Method Blanks (MB)

Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	17	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	4	25.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	25.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	9.09	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix Spikes (MS)

Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	17	5.88	5.00	✔	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	4	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	9	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	9.09	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂) (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 SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
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.



Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂)(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 SnCl ₂ 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)
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 negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) 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. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
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, Na ₂ SO ₄ 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.



Preparation Methods	Method	Matrix	Method Descriptions
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.



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

ABN: 50 005 085 521

Melbourne 6 Monterey Road Dandenong South VIC 3175 +61 3 8564 5000 NATA# 1261 Site# 1254	Geelong 19/8 Lewalan Street Grovedale VIC 3216 +61 3 8564 5000 NATA# 1261 Site# 25403	Sydney 179 Magowar Road Girraween NSW 2145 +61 2 9900 8400 NATA# 1261 Site# 18217	Canberra Unit 1,2 Dacre Street Mitchell ACT 2911 +61 2 6113 8091 NATA# 1261 Site# 25466	Brisbane 1/21 Smallwood Place Murarrie QLD 4172 +61 7 3902 4600 NATA# 1261 Site# 20794 & 2780	Newcastle 1/2 Frost Drive Mayfield West NSW 2304 +61 2 4968 8448 NATA# 1261 Site# 25079
---	--	--	--	--	--

ABN: 91 05 0159 898

Perth 46-48 Banksia Road Welshpool WA 6106 +61 8 6253 4444 NATA# 2377 Site# 2370 & 2554
--

NZBN: 9429046024954

Auckland 35 O'Rorke Road Penrose Auckland 1061 +64 9 526 4551 IANZ# 1327	Auckland (Focus) Unit C1/4 Pacific Rise Mount Wellington Auckland 1061 +64 9 525 0568 IANZ# 1308	Christchurch 43 Detroit Drive Rolleston Christchurch 7675 +64 3 343 5201 IANZ# 1290	Tauranga 1277 Cameron Road Gate Pa Tauranga 3112 +64 9 525 0568 IANZ# 1402
--	--	---	--

Company Name: GHD PTY LTD
Address: Level 8, 180 Lonsdale St
Melbourne
VIC 3000

Order No.:
Report #: 1215277
Phone: 8687 8000
Fax: 8687 8111

Received: May 2, 2025 4:40 PM
Due: May 9, 2025
Priority: 5 Day
Contact Name: - Gabriella Crea

Project Name: 3Rivers - NSW SDLAM Engineering Services
Project ID: 12537654

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964*	HOLD*	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B4	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X
External Laboratory												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	Split-02	Apr 29, 2025		Soil	M25-My0006937	X		X	X	X	X	X
2	Split-01	Apr 29, 2025		Soil	M25-My0006938	X		X	X	X	X	X
3	Split-03	Apr 29, 2025		Soil	M25-My0006939		X					
Test Counts						2	1	2	2	2	2	2

GHD PTY LTD
Level 8, 180 Lonsdale St
Melbourne
VIC 3000



NATA Accredited
Accreditation Number 1261
Site Number 1254

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: **Meg Turner**

Report **1215277-S**
Project name **3Rivers - NSW SDLAM Engineering Services**
Project ID **12537654**
Received Date **May 02, 2025**

Client Sample ID			Split-02	Split-01
Sample Matrix			Soil	Soil
Eurofins Sample No.			M25-My0006937	M25-My0006938
Date Sampled			Apr 29, 2025	Apr 29, 2025
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{*N01}	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 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
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	91	85
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)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

Client Sample ID			Split-02	Split-01
Sample Matrix			Soil	Soil
Eurofins Sample No.			M25-My0006937	M25-My0006938
Date Sampled			Apr 29, 2025	Apr 29, 2025
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
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	%	89	86
p-Terphenyl-d14 (surr.)	1	%	102	110
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05
α-HCH	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
β-HCH	0.05	mg/kg	< 0.05	< 0.05
δ-HCH	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
γ-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorodate (surr.)	1	%	122	101
Tetrachloro-m-xylene (surr.)	1	%	90	97
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled Test/Reference	LOR	Unit	Split-02 Soil M25- My0006937 Apr 29, 2025	Split-01 Soil M25- My0006938 Apr 29, 2025
Organophosphorus Pesticides				
Dimethoate	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	102	81
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	122	101
Tetrachloro-m-xylene (surr.)	1	%	90	97
Heavy Metals				
Arsenic	2	mg/kg	3.7	2.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	9.2	11
Copper	5	mg/kg	6.1	< 5
Lead	5	mg/kg	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	10	7.8
Zinc	5	mg/kg	15	14
Sample Properties				
% Moisture	1	%	1.3	11

Client Sample ID			Split-02	Split-01
Sample Matrix			Soil	Soil
Eurofins Sample No.			M25-My0006937	M25-My0006938
Date Sampled			Apr 29, 2025	Apr 29, 2025
Test/Reference	LOR	Unit		
PFASs Summations				
Sum (PFHxS + PFOS)*	0.1	ug/kg	< 0.1	< 0.1
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.1	ug/kg	< 0.1	< 0.1
Sum of PFASs (n=30)*	0.5	ug/kg	< 0.5	< 0.5
Sum of US EPA PFAS (PFOS + PFOA)*	0.1	ug/kg	< 0.1	< 0.1
Sum of WA DWER PFAS (n=10)*	0.5	ug/kg	< 0.5	< 0.5
Perfluoroalkyl sulfonamido substances- Trace				
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
13C8-FOSA (surr.)	1	%	74	75
D3-N-MeFOSA (surr.)	1	%	81	85
D5-N-EtFOSA (surr.)	1	%	76	78
D7-N-MeFOSE (surr.)	1	%	82	75
D9-N-EtFOSE (surr.)	1	%	79	83
D5-N-EtFOSAA (surr.)	1	%	16	15
D3-N-MeFOSAA (surr.)	1	%	16	14
Perfluoroalkyl carboxylic acids (PFCAs) - Trace				
Perfluorobutanoic acid (PFBA) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
Perfluoropentanoic acid (PFPeA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorohexanoic acid (PFHxA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorooctanoic acid (PFOA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorononanoic acid (PFNA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorodecanoic acid (PFDA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.1	ug/kg	< 0.1	< 0.1
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
13C4-PFBA (surr.)	1	%	76	78
13C5-PFPeA (surr.)	1	%	85	86
13C5-PFHxA (surr.)	1	%	86	83
13C4-PFHpA (surr.)	1	%	83	89
13C8-PFOA (surr.)	1	%	65	68
13C5-PFNA (surr.)	1	%	72	75
13C6-PFDA (surr.)	1	%	62	63
13C2-PFUnDA (surr.)	1	%	60	60
13C2-PFDoDA (surr.)	1	%	53	60
13C2-PFTeDA (surr.)	1	%	62	73

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled Test/Reference	LOR	Unit	Split-02 Soil M25- My0006937 Apr 29, 2025	Split-01 Soil M25- My0006938 Apr 29, 2025
Perfluoroalkyl sulfonic acids (PFASs)- Trace				
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.1	ug/kg	< 0.1	< 0.1
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.1	ug/kg	< 0.1	< 0.1
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.1	ug/kg	< 0.1	< 0.1
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.1	ug/kg	< 0.1	< 0.1
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.1	ug/kg	< 0.1	< 0.1
13C3-PFBS (surr.)	1	%	91	102
18O2-PFHxS (surr.)	1	%	84	98
13C8-PFOS (surr.)	1	%	82	89
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA) ^{N11}	0.5	ug/kg	< 0.5	< 0.5
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.1	ug/kg	< 0.1	< 0.1
13C2-4:2 FTSA (surr.)	1	%	87	85
13C2-6:2 FTSA (surr.)	1	%	60	81
13C2-8:2 FTSA (surr.)	1	%	70	70
13C2-10:2 FTSA (surr.)	1	%	42	40

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
Eurofins Suite B4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 06, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 05, 2025	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	May 06, 2025	14 Days
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Melbourne	May 05, 2025	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	May 06, 2025	14 Days
Eurofins Suite B15			
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	May 06, 2025	14 Days
Organophosphorus Pesticides - Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)	Melbourne	May 06, 2025	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	May 06, 2025	28 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	May 05, 2025	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	May 02, 2025	14 Days
Per- and Polyfluoroalkyl Substances (PFASs) - Trace			
PFASs Summations - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level	Melbourne	May 09, 2025	
Perfluoroalkyl sulfonamido substances- Trace - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level	Melbourne	May 09, 2025	28 Days
Perfluoroalkyl carboxylic acids (PFCAs) - Trace - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level	Melbourne	May 09, 2025	28 Days
Perfluoroalkyl sulfonic acids (PFASs)- Trace - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level	Melbourne	May 09, 2025	28 Days
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace - Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level	Melbourne	May 09, 2025	28 Days



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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370 & 2554

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise	43 Detroit Drive	1277 Cameron Road
Penrose	Mount Wellington	Rolleston	Gate Pa
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name:

Address:

Project Name:

Project ID:

GHD PTY LTD

Level 8, 180 Lonsdale St

Melbourne

VIC 3000

3Rivers - NSW SDLAM Engineering Services

12537654

Order No.:

Report #:

Phone:

Fax:

1215277

8687 8000

8687 8111

Received:

Due:

Priority:

Contact Name:

May 2, 2025 4:40 PM

May 9, 2025

5 Day

- Gabriella Crea

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964*	HOLD*	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B4	Per- and Polyfluoroalkyl Substances (PFASs) - Ultra Trace
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X
External Laboratory												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	Split-02	Apr 29, 2025		Soil	M25-My0006937	X		X	X	X	X	X
2	Split-01	Apr 29, 2025		Soil	M25-My0006938	X		X	X	X	X	X
3	Split-03	Apr 29, 2025		Soil	M25-My0006939		X					
Test Counts						2	1	2	2	2	2	2

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

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

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances- Trace							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 0.5			0.5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 0.5			0.5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 0.5			0.5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/kg	< 0.5			0.5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/kg	< 0.5			0.5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 0.5			0.5	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 0.5			0.5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorobutanoic acid (PFBA)	ug/kg	< 0.5			0.5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 0.1			0.1	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 0.1			0.1	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 0.1			0.1	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 0.1			0.1	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 0.1			0.1	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 0.1			0.1	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 0.1			0.1	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 0.1			0.1	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 0.1			0.1	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 0.1			0.1	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)- Trace							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 0.1			0.1	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 0.1			0.1	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 0.1			0.1	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 0.1			0.1	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 0.1			0.1	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 0.1			0.1	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 0.1			0.1	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 0.1			0.1	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 0.1			0.1	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 0.5			0.5	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 0.1			0.1	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 0.1			0.1	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	120			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C10	%	93			70-130	Pass	
TRH >C10-C16	%	118			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	76			70-130	Pass	
Toluene	%	81			70-130	Pass	
Ethylbenzene	%	87			70-130	Pass	
m&p-Xylenes	%	87			70-130	Pass	
Xylenes - Total*	%	85			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	77			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	97			70-130	Pass	
Acenaphthylene	%	107			70-130	Pass	
Anthracene	%	92			70-130	Pass	
Benz(a)anthracene	%	106			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	%	95			70-130	Pass	
Benzo(g,h,i)perylene	%	83			70-130	Pass	
Benzo(k)fluoranthene	%	109			70-130	Pass	
Chrysene	%	92			70-130	Pass	
Dibenz(a,h)anthracene	%	91			70-130	Pass	
Fluoranthene	%	106			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	107			70-130	Pass	
Phenanthrene	%	98			70-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	93			70-130	Pass	
4,4'-DDD	%	113			70-130	Pass	
4,4'-DDE	%	97			70-130	Pass	
4,4'-DDT	%	76			70-130	Pass	
α-HCH	%	76			70-130	Pass	
Aldrin	%	84			70-130	Pass	
β-HCH	%	82			70-130	Pass	
δ-HCH	%	83			70-130	Pass	
Dieldrin	%	85			70-130	Pass	
Endosulfan I	%	103			70-130	Pass	
Endosulfan II	%	84			70-130	Pass	
Endosulfan sulphate	%	78			70-130	Pass	
Endrin	%	76			70-130	Pass	
Endrin aldehyde	%	76			70-130	Pass	
Endrin ketone	%	89			70-130	Pass	
γ-HCH (Lindane)	%	80			70-130	Pass	
Heptachlor	%	93			70-130	Pass	
Heptachlor epoxide	%	85			70-130	Pass	
Hexachlorobenzene	%	94			70-130	Pass	
Methoxychlor	%	88			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Diazinon	%	96			70-130	Pass	
Dimethoate	%	94			70-130	Pass	
Ethion	%	93			70-130	Pass	
Fenitrothion	%	78			70-130	Pass	
Methyl parathion	%	76			70-130	Pass	
Mevinphos	%	92			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	98			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	119			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	98			80-120	Pass	
Copper	%	118			80-120	Pass	
Lead	%	117			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	119			80-120	Pass	
Zinc	%	101			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances- Trace							
Perfluorooctane sulfonamide (FOSA)	%	108			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	92			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	109			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	89			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	83			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	93			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	91			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorobutanoic acid (PFBA)	%	95			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	110			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	89			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	84			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	91			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	85			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	76			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	76			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	79			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	94			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	87			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSA)s- Trace							
Perfluorobutanesulfonic acid (PFBS)	%	77			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	98			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	95			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	77			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	80			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	78			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	94			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	85			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)s- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	92			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)			%	72			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	M25-My0009505	NCP	%	159			70-130	Fail	Q08
TRH C10-C14	M25-My0007302	NCP	%	92			70-130	Pass	
TRH C6-C10	M25-My0009505	NCP	%	125			70-130	Pass	
TRH >C10-C16	M25-My0007302	NCP	%	89			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M25-My0009505	NCP	%	99			70-130	Pass	
Toluene	M25-My0009505	NCP	%	106			70-130	Pass	
Ethylbenzene	M25-My0009505	NCP	%	118			70-130	Pass	
m&p-Xylenes	M25-My0009505	NCP	%	121			70-130	Pass	
o-Xylene	M25-My0009505	NCP	%	119			70-130	Pass	
Xylenes - Total*	M25-My0009505	NCP	%	120			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M25-My0005001	NCP	%	97			70-130	Pass	
Acenaphthylene	M25-My0005001	NCP	%	104			70-130	Pass	
Anthracene	M25-My0005001	NCP	%	97			70-130	Pass	
Benz(a)anthracene	M25-My0005001	NCP	%	100			70-130	Pass	
Benzo(a)pyrene	M25-My0005001	NCP	%	102			70-130	Pass	
Benzo(b&j)fluoranthene	M25-My0005001	NCP	%	103			70-130	Pass	
Benzo(g,h,i)perylene	M25-My0005001	NCP	%	98			70-130	Pass	
Benzo(k)fluoranthene	M25-My0005001	NCP	%	99			70-130	Pass	
Chrysene	M25-My0005001	NCP	%	93			70-130	Pass	
Dibenz(a,h)anthracene	M25-My0005001	NCP	%	94			70-130	Pass	
Fluoranthene	M25-My0005001	NCP	%	84			70-130	Pass	
Fluorene	M25-My0005001	NCP	%	98			70-130	Pass	
Indeno(1,2,3-cd)pyrene	M25-My0005001	NCP	%	96			70-130	Pass	
Naphthalene	M25-My0005001	NCP	%	110			70-130	Pass	
Phenanthrene	M25-My0005001	NCP	%	79			70-130	Pass	
Pyrene	M25-My0005001	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M25-My0007452	NCP	%	84			70-130	Pass	
4,4'-DDD	M25-My0007452	NCP	%	116			70-130	Pass	
4,4'-DDE	M25-My0007452	NCP	%	87			70-130	Pass	
4,4'-DDT	M25-My0007452	NCP	%	95			70-130	Pass	
a-HCH	M25-My0007452	NCP	%	98			70-130	Pass	
Aldrin	M25-My0007452	NCP	%	77			70-130	Pass	
b-HCH	M25-My0007452	NCP	%	79			70-130	Pass	
d-HCH	M25-My0007452	NCP	%	73			70-130	Pass	
Dieldrin	M25-My0007452	NCP	%	83			70-130	Pass	
Endosulfan I	M25-My0007452	NCP	%	90			70-130	Pass	
Endosulfan II	M25-My0007452	NCP	%	75			70-130	Pass	
Endosulfan sulphate	M25-My0007452	NCP	%	75			70-130	Pass	
Endrin	M25-My0007452	NCP	%	83			70-130	Pass	
Endrin aldehyde	M25-My0007452	NCP	%	100			70-130	Pass	
Endrin ketone	M25-My0007452	NCP	%	93			70-130	Pass	
g-HCH (Lindane)	M25-My0007452	NCP	%	85			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	M25-My0007452	NCP	%	76			70-130	Pass	
Heptachlor epoxide	M25-My0007452	NCP	%	74			70-130	Pass	
Hexachlorobenzene	M25-My0007452	NCP	%	85			70-130	Pass	
Methoxychlor	M25-My0007452	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M25-Ap0055874	NCP	%	106			70-130	Pass	
Dimethoate	M25-Ap0055874	NCP	%	77			70-130	Pass	
Ethion	M25-Ap0055874	NCP	%	92			70-130	Pass	
Fenitrothion	M25-Ap0055874	NCP	%	83			70-130	Pass	
Methyl parathion	M25-Ap0055874	NCP	%	80			70-130	Pass	
Mevinphos	M25-Ap0055874	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M25-My0010581	NCP	%	112			70-130	Pass	
Aroclor-1260	M25-My0010581	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M25-My0006745	NCP	%	80			75-125	Pass	
Cadmium	M25-My0006598	NCP	%	103			75-125	Pass	
Chromium	M25-My0006598	NCP	%	83			75-125	Pass	
Copper	M25-My0006598	NCP	%	82			75-125	Pass	
Lead	M25-My0006745	NCP	%	84			75-125	Pass	
Mercury	M25-My0006598	NCP	%	83			75-125	Pass	
Nickel	M25-My0006598	NCP	%	86			75-125	Pass	
Zinc	M25-My0006598	NCP	%	77			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs) - Trace				Result 1					
Perfluorooctanoic acid (PFOA)	M25-My0017965	NCP	%	110			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSA)s- Trace				Result 1					
Perfluorohexanesulfonic acid (PFHxS)	M25-My0017965	NCP	%	91			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M25-My0017965	NCP	%	102			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)s- Trace				Result 1					
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M25-My0017965	NCP	%	78			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	M25-My0009874	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M25-My0007122	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH C15-C28	M25-My0007122	NCP	mg/kg	< 250	< 250	<1	30%	Pass	
TRH C29-C36	M25-My0007122	NCP	mg/kg	560	590	4.0	30%	Pass	
TRH C6-C10	M25-My0009874	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M25-My0007122	NCP	mg/kg	< 250	< 250	<1	30%	Pass	
TRH >C16-C34	M25-My0007122	NCP	mg/kg	640	680	6.0	30%	Pass	
TRH >C34-C40	M25-My0007122	NCP	mg/kg	< 500	< 500	<1	30%	Pass	

Duplicate								
BTX				Result 1	Result 2	RPD		
Benzene	M25-My0009874	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M25-My0009874	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M25-My0009874	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M25-My0009874	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M25-My0009874	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total*	M25-My0009874	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M25-My0009874	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M25-My0002856	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M25-My0002856	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M25-My0002856	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M25-My0007420	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	M25-My0002856	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfothion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	M25-My0002856	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	M25-My0002856	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	M25-My0002856	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M25-My0007420	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M25-My0006747	NCP	mg/kg	3.7	3.0	21	30%	Pass
Cadmium	M25-My0006747	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M25-My0006747	NCP	mg/kg	13	17	25	30%	Pass
Copper	M25-My0006747	NCP	mg/kg	20	23	12	30%	Pass
Lead	M25-My0006747	NCP	mg/kg	45	49	7.0	30%	Pass
Mercury	M25-My0006747	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	M25-My0006747	NCP	mg/kg	45	49	9.0	30%	Pass
Zinc	M25-My0006747	NCP	mg/kg	200	200	1.0	30%	Pass

Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	M25-My0006917	NCP	%	5.3	5.3	1.0	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances- Trace				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs) - Trace				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorononanoic acid (PFNA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSA)- Trace				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass

Duplicate								
n:2 Fluorotelomer sulfonic acids (n:2 FTSA)- Trace				Result 1	Result 2	RPD		
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	M25-My0006937	CP	ug/kg	< 0.5	< 0.5	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M25-My0006937	CP	ug/kg	< 0.1	< 0.1	<1	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	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).
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised by:

Nileshni Goundar	Analytical Services Manager
Carroll Lee	Senior Analyst-Organic
Edward Lee	Senior Analyst-Organic
Emily Rosenberg	Senior Analyst-Metal
Joseph Edouard	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-PFAS
Joseph Edouard	Senior Analyst-Volatile
Sheha Prakash	Senior Analyst-Organic



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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



[Website]

➔ The Power of Commitment