

HOLDMARK NSW PTY LTD



Detailed Site Investigation

82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park, NSW

Document Control

Report Title: Detailed Site Investigation

Report No: E25077.E02.Rev0

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Revision	Details	Date	Amended By	
0	Original	28 May 2021		

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Table of Contents

			Page Number
EX	ECUT	TIVE SUMMARY	1
1.	INTI	RODUCTION	1
	1.1	Background and Purpose	1
	1.2	Proposed Development	1
	1.3	Regulatory Framework	2
	1.4	Project Objectives	2
	1.5	Scope of Works	3
		1.5.1 Desktop Study	3
		1.5.2 Field Work & Laboratory Analysis	3
		1.5.3 Data Analysis and Reporting	4
2.	SITI	EDESCRIPTION	4
	2.1	Property Identification, Location and Physical Setting	4
	2.2	Surrounding Land Use	5
	2.3	Regional Setting	6
	2.4	Groundwater Bore Records and Groundwater Use	7
	2.5	Site Walkover	7
3.	PRE	VIOUS INVESTIGATIONS	8
	3.1	Available documents	8
4.	SITI	HISTORY	11
	4.1	EPA Online Records	11
	4.2	List of NEW contaminated Sites Notified to EPA	11
	4.3	POEO Public Register	11
5.	COI	NCEPTUAL SITE MODEL	12
	5.1	Subsurface Conditions	12
	5.2	Potential Contamination Sources	12
	5.3	Potential Contaminants	13
	5.4	Potential Sources, Exposure Pathways and Receptors	13
	5.5	Data Gaps	16
6.	MET	THODOLOGY	17
	6.1	Sampling, Analytical and Quality Plan (SAQP)	17
	6.2	Data Quality Objectives (DQO)	17
	6.3	Data Quality Indicators	20
	6.4	Sampling Rationale	20
	6.5	Investigation Constraints	20
	6.6	Assessment Criteria	21
	6.7	Soil Investigation	22



	6.8	Groundwater Investigation	23
7	. DAT	A QUALITY ASSESSMENT	27
	7.1	Quality Overview	28
8	B. RES	ULTS	29
	8.1	Soil Investigation Results	29
		8.1.1 Site Geology and Subsurface Conditions	29
		8.1.2 Field Observations and PID Results	31
	8.2	Groundwater Investigation Results	31
		8.2.1 Monitoring Well Construction	31
		8.2.2 Field Observations and Water Test Results	32
	8.3	Laboratory Analytical Results	33
		8.3.1 Soil Analytical Results	33
		8.3.2 Groundwater Analytical Results	35
		8.3.3 Acid Sulfate Soils Analytical Results	37
9	. SITE	CHARACTERISATION	39
	9.1	Review of Conceptual Site Model	39
	9.2	Data Gaps	40
1	0. CON	CLUSIONS	41
1	1. REC	OMMENDATIONS	43
1	2. STA	TEMENT OF LIMITATIONS	44
F	REFERE	NCES	45
A	ABBREV	TATIONS	46
Sche	edule	e of Tables	
Т	able 2-1	Site Identification, Location and Zoning	4
	able 2-2	Surrounding Land Uses	5
	able 2-3	Regional Setting Information	6
	able 3-1 able 5-1	Summary of Previous Investigation Works and Findings Preliminary Conceptual Site Model	8 14
	able 5-1	Summary of Project Data Quality Objectives	18
	able 6-2	Data Quality Indicators	20
	able 6-3	Adopted Investigation Levels for Soil and Groundwater	21
	able 6-4	Summary of Soil Investigation Methodology	22
	able 6-5 able 7-1	Summary of Groundwater Investigation Methodology Quality Control Process	23 27
	able 7-1	Generalised Subsurface Profile (m bgl)	30
	able 8-2	Monitoring Well Construction Details	31
	able 8-3	Groundwater Field Data (GME date 30 April 2021)	32
Т	able 8-4	Summary of Soil Analytical Results	33



Table 10-1 Refined Conceptual Site Model

Appendices

APPENDIX A - FIGURES

- A.1 Site Locality Plan
- A.2 Sampling location Plan
- A.3 Groundwater Regime and Flow Direction
- **APPENDIX B TABLES**
- **APPENDIX C DEVELOPMENT PLANS**
- APPENDIX D IDENTIFIED SOURCES BY PREVIOUS ASSESSMENTS
- APPENDIX E POEO SEARCH
- **APPENDIX F CALIBRATION CERTIFICATES**
- **APPENDIX G BOREHOLE LOGS**
- **APPENDIX H FIELD DATA SHEETS**
- APPENDIX I CHAIN OF CUSTODY AND SAMPLE RECEIPT FORMS
- **APPENDIX J LABORATORY ANALYTICAL REPORTS**
- **APPENDIX K QA/QC ASSESSMENT**



Executive Summary

Background

Holdmark NSW Pty Ltd engaged EI Australia (EI) to conduct a Detailed Site Investigation (DSI) for the former industrial properties located at 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park, NSW ('the site'). This environmental assessment was completed as part of a development application process through City of Parramatta Council, to allow site redevelopment for mixed land use, medium to high density residential dwellings with green open space.

Objectives

The primary objectives of this investigation were to:

- Evaluate the potential for site contamination on the basis of historical land uses, anecdotal and documentary evidence of possible pollutant sources; and
- To investigate the degree of any potential contamination by means of intrusive sampling and laboratory analysis, for relevant contaminants of concern.

A further objective, should site contamination be confirmed, was to make recommendations for the appropriate management of any contaminated soils and/or groundwater.

Findings

The work was conducted with reference to the regulatory framework outlined in **Section 1.5** of this report and assessment findings indicated the following:

- The site had mainly been used for industrial purposes.
- The sub-surface layers of the site were comprised of fill materials, overlying residual clays and sandstone bedrock.
- 82 Hughes Avenue:
 - Multiple environmental investigations have been completed and identified localised asbestos contamination impacts in 82 Hughes Avenue Ermington which is summarised in Section 3.
 - Acid Sulfate Soils screening assessment showed low probability of ASS.
 - Groundwater SWLs were at depths ranging from 1.37 to 3.91 meters below.
 - Results for the groundwater samples were all below the adopted GILs, with the exception of copper, nickel and zinc which is representative of the background conditions
- 30 Waratah Street:
 - All contaminants were below the adopted criteria with the exception of heavy metals reported concentrations which were above the adopted criteria.
 - Acid Sulfate Soils screening assessment showed a risk of ASS. Additional ASS assessment should to be carried out post-demolition.
 - Groundwater SWLs were at depths ranging from 2.45 to 3.37 meters below ground level.



- Results for the groundwater samples were all below the adopted GILs, with the exception of copper, nickel, arsenic and zinc which is representative of the background conditions
- Sample GW-30_BH111M-1 showed an elevated concentration of PFOS (29μg/L) which exceeded the adopted the criteria (0.13μg/L)

32 Waratah Street:

- All contaminants were below the adopted criteria with the exception of sample 32-BH106_1.4-1.5 which reported a zinc concentration above the adopted criteria.
- Acid Sulfate Soils screening assessment showed low probability of ASS due to the shallow bedrock.
- All groundwater monitoring wells were dry except monitoring well 32-BH104M which contained a SWL of 1.36 mBGL.
- Results for the groundwater sample were limited amount and tested only for PFAS. The lab results showed concentrations below the adopted criteria.

112 Wharf Road:

- All contaminants were below the adopted criteria.
- Acid Sulfate Soils screening assessment showed low probability of ASS due to the shallow bedrock.
- All groundwater monitoring wells were dry except monitoring well 112-BH113M which contained a SWL of 3.32 mBGL.
- Results for the groundwater sample were all below the adopted GILs, with the exception of copper, nickel and zinc which is representative of the background conditions

Conclusions

Based on the findings of this DSI and with consideration of the Statement of Limitations (**Section 12**), EI concluded that widespread contamination was not present at the site. The site can be made suitable for the proposed development, subject to addressing the recommendations listed in **Section.11**.

Recommendations

In view of the findings of this investigation and in accordance with the NEPC (2013) guidelines, it is considered that the site can be made suitable for the proposed mixed land use, medium to high density residential dwellings with green open space on completion of the following recommendations:

- Preparation and implementation of a Remediation Action Plan (RAP). The RAP should include, but not necessarily be limited to, the following:
 - Preparation and implementation of a Remediation Action Plan (RAP), to address the fill soil contamination.
 - The RAP should also address the reported groundwater exceedances to confirm the quality of the groundwater.



- A plan for validation works to confirm the sites environmental condition following remedial works; and
- Procedures to deal with any unexpected finds identified during construction.
- The preparation and implementation of Asbestos Management Plan (AMP), in order to outline control measures that are required to prevent exposure of site personnel to any type of asbestos.
- A Waste Management Plan should be prepared in accordance with City of Parramatta Council DCP guidelines which should include:
 - Classification of all waste material to be removed from the site in accordance with the EPA (2014) Waste Classification Guidelines, Protection of the Environment Operations Act 1997, and Work Health and Safety Regulation 2017;
 - Assessment of any soil/fill material imported onto the site. Imported soil must:
 - 1.be classified as virgin excavated natural material (VENM); or
 - 2. have a classification certificate indicating it is suitable for the propsed land use;
- Preparation of a final site validation report by a qualified environmental consultant, certifying site suitability for the proposed development.



1. Introduction

1.1 Background and Purpose

Holdmark NSW Pty Ltd engaged El Australia Pty Ltd (El) to conduct a Detailed Site Investigation (DSI) at 82 Hughes Avenue, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park, NSW ('the site').

The site located on the Parramatta River at Melrose Park (**Figure A.1**) comprises four lots; Lot 3 in Deposited Plan (DP) 602080 (Ermington), Lot 100 in DP 853170, Lot 1 in DP 519737, Lots 6 &7 in DP511531, Lots 1, 2 & 3 in DP 127049 (Melrose Park); is situated within the Local Government Area of City of Parramatta Council, and covers a total area of 9.43 ha. At the time of conducting this DSI, the site was used for commercial purposes.

The DSI was undertaken as part of an environmental due diligence process to support a Development Application (DA) to City of Parramatta Council, and for the purpose of enabling the developer to meet its obligations under the Contaminated Land Management Act 1997 (CLM Act), for the assessment and management of contaminated soil and/or groundwater.

For consistency with the previous reports the site was divided into:

- Holdmark west comprising 82 Hughes Avenue, Ermington, and;
- Holdmark east comprising 30 & 32 Waratah Street and 112 Wharf Road, Melrose Park.

This investigation follows on from a Preliminary Site Investigation (PSI) completed by Senversa (Report s17894_002_rpt_psi_rev2, 29 April 2020), and a DSI completed for the Hughes Avenue site by WSP (Report ref: PS110826, 12 September 2018).

In view of the PSI findings and for the purposes of making the site suitable for the proposed uses, Senversa recommended that, at the development application stage or prior to development, further assessment of the properties be carried out in line with the staged approach set out in SEPP 55 – Remediation of Land, Contamination Planning Guidelines and guidance under the CLM Act 1997. This should include:

- A more extensive groundwater assessment at Holdmark West (GSK).
- A DSI at properties within Holdmark East (all three sites).
- If required a remedial action plan (RAP) should be produced that determines how the properties should be remediated to make it suitable for the proposed land uses.

1.2 Proposed Development

The preliminary proposed development plan showed the following:

- 82 Hughes Avenue: Three residential buildings with a mixed land use with green open space;
- 30 Waratah Street: Communal green open space;
- 32 Waratah Street: One residential building as a mixed land use; and
- 112 Wharf Road: Three residential buildings with a mixed land use with green open space.

The development plan is attached as **Appendix C**.



1.3 Regulatory Framework

The following regulatory framework and guidelines were considered during the preparation of this report:

Legislation

- Contaminated Land Management Act 1997;
- State Environment Protection Policy 55 (SEPP 55) Remediation of Land;
- Parramatta Local Environmental Plan 2011;
- Sydney Regional Environmental Plan (Sydney Harbour Catchment), 2005
- State Environmental Planning Policy (Coastal Management), 2018

Guidelines

- Ahern CR, Stone Y and Blunden B (1998) Acid Sulfate Soils Assessment Guidelines, part
 of the ASS Manual, Acid Sulfate Soil Management Advisory Committee (ASSMAC),
 Wollongbar, NSW, Australia, 28 August 1998.
- ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Governments and Australian State and Territory Governments, Canberra ACT, Australia, August 2018.
- CRC CARE (2017) Risk-Based Management and Remediation Guidance for Benzo(a)pyrene, CRC CARE Technical Report No. 39, CRC for Contamination Assessment and Remediation of the Environment, Newcastle, Australia, January 2017.
- DEC (2007) Guidelines for the Assessment and Management of Groundwater Contamination;
- EnRisk (2016) Proposed Decision Tree for Prioritising Sites Potentially Contaminated with PFASs, Environmental Risk Services Pty Ltd, Environment Protection Authority of New South Wales, 25 February 2016.
- EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd Edition);
- EPA (1995) Sampling Design Guidelines;
- EPA (2020) Consultants Reporting on Contaminated Land: Contaminated Land Guidelines;
- NEMP (2020) PFAS National Environmental Management Plan, National Chemicals Working Group of the Heads of the EPAs Australia and New Zealand (HEPA), January 2020.
- NEPC (2013) Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater,
- NEPC (2013) Schedule B(2) Guideline on Site Characterisation;
- NUDLC (2012) Minimum Construction Requirements for Water Bores in Australia (3rd Edition). National Uniform Drillers Licensing Committee 2011, February 2012.

1.4 Project Objectives

The main objectives of this assessment are:

Undertake the additional investigations outlined in the previous environmental reports;



- to evaluate the potential for site contamination on the basis of historical land uses, anecdotal and documentary evidence of possible pollutant sources; and
- to investigate the degree of any potential contamination by means of intrusive sampling and laboratory analysis, for relevant contaminants of concern.

A further objective, should site contamination be confirmed, will be to make recommendations for the appropriate management of any contaminated soils and/or groundwater.

1.5 Scope of Works

In order to achieve the above objectives and in keeping the project cost-effective while generally complying with the EPA (2020) guidelines for consultants reporting on contaminated sites, the scope of works was as follows:

1.5.1 Desktop Study

- DBYD service clearance, Health Work & Safety Plan and field-work preparation;
- A review of relevant hydrogeological and soil landscape maps for the project area;
- Detailed review of the previous PSI report for the Holdmark East area and the previous DSI report for the Holdmark West area;
- A detailed site walkover of all areas;
- Searches through the EPA records to confirm that there are no statutory notices current on the site under the *Protection of the Environment Operations Act 1997* or the *Contaminated Land Management Act 1997*;

1.5.2 Field Work & Laboratory Analysis

- Drilled of 34 test boreholes distributed in a grid-based pattern at accessible areas, outside of the buildings, across all of the sites, for soil contamination assessment. These will be concrete cored at locations that are cleared for underground services and drilled to 4 m below ground level (bgl), unless prior refusal occurs. The bores will be broadly distributed as follows:
 - 12 bores at the site 30 Waratah Street;
 - > 20 bores at the sites 32 Waratah and 112 Wharf Road; and
 - 2 deep bores will be drilled at 82 Hughes Avenue, to around 1 m below the proposed lower basement floor level, for acid sulfate soil assessment purposes.
- Bore logged and multiple level soil sampling within fill and natural soils;
- Drilled and installed of 12 groundwater monitoring bores, distributed across the properties (2 new monitoring bores installed for Holdmark West, with 10 new monitoring bores for Holdmark East), upgradient and down gradient of potential contamination sources;
- Monitoring wells will be constructed to EPA standards with screen intervals set at 1 m above to 2 m below the ambient groundwater level, to ensure that any free phase hydrocarbons are detected if present;
- Field water quality testing and groundwater sampling using low-flow methods at all newly installed monitoring wells which contained groundwater and two existing groundwater monitoring wells;



- Laboratory analysis of selected groundwater samples for relevant analytical parameters as determined from the site history survey and field observations during the investigation program; and
- Laboratory analysis of selected soil samples for relevant analytical parameters, including ASS parameters and quantitative asbestos testing, as determined from the site history survey and field observations during the investigation program, as listed under 'laboratory analysis', below.

1.5.3 Data Analysis and Reporting

This DSI report has been prepared to document desk study findings, the conceptual site model, data quality objectives, investigation methodologies and results. The report also provides a record of observations made during the detailed site walkover inspection, borehole and monitoring well construction logs and a discussion of laboratory analytical results in regards to potential risks to human health, the environment and the aesthetic uses of the land.

2. Site Description

2.1 Property Identification, Location and Physical Setting

The site identification details and associated information are presented in **Table 2-1**, while the site locality is shown in **Figure A.1**.

Table 2-1 Site Identification, Location and Zoning

Attribute	Description
Street Address	Holdmark West; 82 Hughes Avenue, Ermington NSW; and
	Holdmark east; 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park, NSW
Location Description	The western part is bounded by industrial/commercial properties (north), Atkins Road (west), Hughes Avenue (east), and George Kendall Riverside Park and Parramatta River (south).
	The eastern part is bounded by Mary Street and Industrial/commercial properties (north), industrial/commercial property (west), Wharf Road (east), and Ermington Bay Nature Trail, Archer Park and Parramatta River (south).
Coordinates	Northeast corner of site: GDA2020-MGA56 Easting: 321661.086, Northing: 6256649.687 (Source: http://maps.six.nsw.gov.au)
Site Area	94,300m ² (Ref. http://maps.six.nsw.gov.au)
Site Owner	Holdmark NSW Pty Ltd
Lot and Deposited Plan (DP)	82 Hughes Ave.: Lot 3 in DP 602080.
	30 Waratah St.: Lot 100 in DP 853170.
	32 Waratah St.: Lot 1 in DP 519737 & Lot 6 in DP 511531.
	112 Wharf Rd.: Lots 1, 2 and 3 in DP127049 & Lot 7 in DP 511531.
State Survey Marks	Five State Survey Marks (SSM) are situated in close proximity (<100 m) to the site:
	SS99446 on the corner of Mary Street and Wharf Road;
	SS61855D on the corner of Mary Street and Waratah Street;
	SS14423 south of 32 Waratah Street



Attribute	Description
	SS80432 on the dead-end of Hughes Avenue; and
	SS99666 on the corner of Atkins Road and Saunders Road.
	(Source: http://maps.six.nsw.gov.au)
Local Government Authority	City of Parramatta Council
Current Zoning	IN1 – General Industrial (Parramatta Local Environment Plan, 2011)
Current Land Uses	Industrial and commercial

2.2 Surrounding Land Use

The site is situated within an area of General Industrial (IN1) land zoning. Current uses of surrounding land are described in **Table 2-2**.

Table 2-2 Surrounding Land Uses

Property	Direction Relative to Site	Land Use Description	Sensitive Land Receptors
82 Hughes Avenue	North	Industrial and commercial properties and surrounded by residential properties.	Hughes Avenue Reserve (<230m)
	South	Parramatta River and George Kendall Riverside Park	Parramatta River (Immediate) George Kendall Riverside Park (Immediate)
	West	Residential properties	Residents
	East	Parramatta River, Ermington Bay Nature Trail and industrial and commercial properties	Parramatta River and Ermington Bay Nature Trail (Immediate)
30 Waratah	North	Industrial and commercial properties	-
Street	South	Parramatta River and Ermington Bay Nature Trail	Parramatta River and Ermington Bay Nature Trail (Immediate)
	West	Industrial and commercial properties	-
	East	Industrial and commercial properties	Melrose Park Public School (<20m)
32 Waratah Street	North	Melrose Public School followed by industrial and commercial properties	Melrose Park Public School (<10m)
	South	Archer Park and Parramatta River	Parramatta River, Ermington Bay Nature Trail and Archer Park (Immediate)
	West	Industrial and commercial properties	Parramatta River and Ermington Bay Nature Trail (Immediate)



Property	Direction Relative to Site	Land Use Description	Sensitive Land Receptors
	East	Industrial and commercial properties	Residents (<110m)
112 Wharf Road	North	Melrose Park Public School followed by industrial, commercial and residential properties	Melrose Park Public School (<10m) Jennifer Park Playground (<240m)
	South	Archer Park, Melrose Park Playground and Parramatta River	Archer Park, Melrose Park Playground and Parramatta River (Immediate)
	West	Industrial and commercial property	Parramatta River, Archer Park and Ermington Bay Nature Trail (Immediate)
	East	Residential property	Residents (immediate) Archer Creek (<430m)

2.3 Regional Setting

Regional topography, geology, soil landscape and hydrogeological information are summarised in **Table 2-3**.

Table 2-3 Regional Setting Information

Attribute	Description
Topography	Generally the area is gently sloping towards south (Parramatta River). RLs are ranging as following:
	82 Hughes Avenue: from 13.71 mAHD to 4.61 mAHD towards south east
	 30 Waratah Street: from 11.28 mAHD to 6.72 mAHD towards south west
	32 Waratah Street: from 8.71 mAHD to 4.36 mAHD towards south
	112 Wharf Road: from 13.49 mAHD to 6.42 mAHD towards south
Site Drainage	Consistent with the general slope of the site, stormwater is assumed to flow south towards Parramatta via drainage systems discharging to various stormwater easements and the municipal stormwater system.
Regional Geology	The 1:100 000 scale Sydney Geological Series Sheet 9130, indicates the majority of the site is located on Quaternary estuarine or alluvial sediments (Qha) which is characterized by Silty to peaty quartz sand, silt and clay, with ferruginous and humic cementation in places and common shell layers. However, parts of the site is located on the boundary with Hawkesbury Sandstone (Rh) which is characterized by medium to coarse grained quartz sandstone, very minor shale and laminate lenses. (Ref. 1:100 000 Geological Series Sheet 9130 – Sydney, NSW DMR).
Soil Landscapes	The Soil Conservation Service of NSW Soil Landscapes of the Sydney 1:100,000 Sheet (Chapman and Murphy, 1989) indicates that the site overlies a Lucas Heights (Ih) Residual landscape, which typically includes gently undulating crests and ridges on plateau surfaces of the Mittagong Formation (alternating bands of shale and fine-grained sandstones).



Attribute	Description
Acid Sulfate Soil Risk	With reference to the Prospect/Parramatta River Acid Sulfate Soil Risk Map (1:25,000 scale; Murphy, 1997), the majority of the subject land lies within the map class description of No Known Occurrence with the exception of the southern boundary of the site which is in the interface with class description as High Probability (Ei0).
	The Parramatta Local Environmental Plan 2011- Acid Sulfate Soils Risk Map — Sheet ASS_018, 1:10,000 scale Map indicates that the majority of the site lies within area which is mapped as Acid Sulfate Soils Class 5 with the exception of the southern boundary of the site which is touching Acid Sulfate Soils Class 2.
	Based on the findings of this investigation, the need for further Acid Sulfate soil assessment was considered warranted which is part of this investigation.
Depth to Groundwater	During the site drilling works, groundwater was encountered ranging from 3.0 mBGL (30-BH110M) and 4.2 mBGL (82-BH102M).
	Standing Water Levels (SWLs) were between 1.25 to 4.07 m BTOC during the groundwater gauging.
	Onsite groundwater conditions, including groundwater flow direction, are discussed further in Section 8.2 .
Nearest Surface Water Feature	Parramatta River which is located immediately south of the site.
Groundwater Flow Direction	Groundwater flow direction in the vicinity of the site is inferred to be south towards Parramatta River which is located immediately south of the site.

2.4 Groundwater Bore Records and Groundwater Use

An online search for groundwater bores registered with WaterNSW was conducted by EI on 14 May 2021 (Ref. https://realtimedata.waternsw.com.au/water.stm). The search revealed no registered bores within a 500m radius of the site. This indicated that the local groundwater is not used as a resource. The local groundwater may also be saline from the adjoining Parramatta River (Sydney Harbour).

2.5 Site Walkover

El staff made a number of observations during a detailed site inspection on 25 March 2021. The recorded observations showed no changes since the last visit documented in the previous investigation completed by WSP (WSP, 2018) and Senversa (SV, 2020) with the exception of property number 32 Waratah Street which was vacant and all structures were locked.

Some of the previous observations and potential source zones are outlined in Section 3.



3. Previous Investigations

3.1 Available documents

Previous environmental investigations relating to at least part of the site were as follows:

- Preliminary Site Investigation, Holdmark Property Group: 30-32 Waratah Street & 112 Wharf Road, Melrose Park NSW, by El Australia, (Project. No.: E22945 AA_Rev0, dated on 22 April 2016); and
- Detailed Environmental Investigation, GLAXOSMITHKLINE PTY LTD: 82 Hughes Avenue, Ermington NSW, by WSP Australia Pty Ltd, (Project. No.: PS110826, dated on September 2018); and
- Preliminary Site Investigation, Prepared for Holdmark Property Group, 2 Hughes Avenue, Ermington, NSW, by Senversa Pty Ltd, (Ref. No. s17894_002_rpt_psi_rev2, dated on 29 April 2020).

A summary of the provided reports and key findings is outlined in **Table 3-1**.

Table 3-1 Summary of Previous Investigation Works and Findings

Assessment Details	Project Tasks and Findings	
Preliminary Site Investigation (El, 2016) - 30-32 Waratah Street & 112 Wharf Road, Melrose Park NSW		
Scope of Works	 Desktop study and review of relevant topographical, geological, hydrogeological, soil landscape and Acid Sulfate Soil maps. Search of historical data, land titles, council records and SafeWork. A detailed site walkover inspection. Data analysis and reporting. 	
Key findings	 Historical records indicated that commercial/industrial warehouses occupied the site from around the 1960s and the site continued to be commercial/industrial in nature until the present day; 	
	 The site was not reported as being subject to regulation in relation to environmenta impacts, as documented in the NSW EPA/OEH public registers, however two sites within a 0.5 km radius of the site are subject to regulation by the EPA; 	
	 A WorkCover NSW Authority data search of records relating to historical storage of dangerous goods on the site revealed a number of ASTs and a historic UPSS were present on site; 	
	 A search of Council records relating to previous development applications, building applications and other information pertaining to previous activities at site revealed that each property has been operating for industrial purposes since the 1970's at 3' Waratah Street, the 1980's at 32 Waratah Street and the 1950's at 112 Wharf Road, Melrose Park; 	
	 The site walkover inspection identified a number of areas of environmental concerning significant filling in the southern portions of the site and storage of industrial chemicals and oils on each premise. ASTs were observed at 30 Waratah Street, Melrose Park; 	
Conclusion	El conclude that there is potential for contamination to be present on site. With consideration given to the nature of the proposed land use, intrusive investigation is required to verify the quality of site soils and groundwater	



Assessment Project Tasks and Findings Details Recommendations Carry out a detailed site investigation (DSI) via programme of systematic and targeted sampling to evaluate the quality of site soils and groundwater, and establish the any requirements for remediation, as necessary.; and Prior to site demolition, a Hazardous Materials Survey should be conducted on the existing on-site structures to identify potentially hazardous building products that may potentially be released to the environment during demolition. This survey is necessitated by the needs of protecting site personnel from potential exposure risks and management requirements for implementation as part of site demolition (if necessary). Detailed Environmental Investigation (WSP, 2018) - 82 Hughes Avenue, Ermington Desktop review previous investigation(s) and historical data to determine previous Scope of Works and current land use activities Sampling of fifty seven (57) borehole locations Collection of two groundwater samples Previous A phase 1 contamination assessment has completed by WSP in July 2015 which investigation included a preliminary assessment of soil and groundwater conditions at the site (not provide to EI). During the walkover, WSP identified three areas which were considered a source of contamination as following: The wastewater treatment facility used for pH correction located at the southeastern portion of the site; An area which formerly contained an Ethanol underground storage tank (UST) which was located between the distribution warehouse and the southern carpark; Black staining which was reported in soil during excavations at the western boundary of the site. It was concluded that the site was suitable for the continued commercial/industrial land use. Key findings Slightly elevated concentrations in the surface soils and fill material. • Four locations had detections of asbestos, three of the four were at depth in the fill (0.5mBGL). All contaminants of concern were reported below the site screening criteria with the exception of heavy metals which was slightly elevated. Conclusion and WSP concluded that the site is suitable for ongoing commercial/industrial use and can recommendations be made suitable for residential use following remediation or management of the asbestos finds. This can be managed by: Excavation and disposed off-site to a suitable licenced landfill after classifying the soils/waste in accordance with the NSW EPA, 2014; and/or Capping on site and management under a long term environmental management plan (EMP) Preliminary Site Investigation (SV, 2020) Objective Assess the site's contaminating activities and the likelihood of existing impacts from this activities Assess the requirement of additional assessment or remediation of contamination. Scope NSW EPA contaminated land register search; Historical aerial photographs;



Assessment Details	Project Tasks and Findings
	Groundwater bore information;
	 Relevant government databases;
	 Published soil, geology and topographic maps;
	SafeWork search;
	 A site walkover; and
	 Data evaluation and reporting.
Key findings	West property:
	 Additional groundwater monitoring wells are required to assess any potential on-
	site and/or off-site sources of contamination; and
	 Analysis of soil or groundwater for associated pharmaceuticals.
	East properties:
	 The contamination status is unknown and previous desktop assessments have
	reported a medium to high risk that contamination is present.
Conclusion	Senversa recommended that at development application stage or prior to
	development, further assessment of all properties to be carried out in line with the
	staged approach set out in SEPP55 - Remediation of Land, Contamination Planning
	Guidelines and guidance under the CLM Act 1997.
Recommendations	Extensive groundwater assessment at the western property;
	 A DSI at the eastern properties;
	If required a RAP should be produced that determines how the site should be
	remediated to make it suitable for the proposed land uses.

A plan showing all sources and findings identified in the previous environmental assessments is attached in **Appendix D**.



4. Site History

4.1 EPA Online Records

On 17 May 2021, an on-line search of the contaminated land public record of NSW Environment Protection Authority (EPA) was conducted. This search confirmed that the NSW EPA had no regulatory involvement in relation to the area of investigation, or properties in proximity to the site. The contaminated land public record is a searchable database of:

- Orders made under Part 3 of the Contaminated Land Management Act 1997 (CLM Act);
- Approved voluntary management proposals under the CLM Act that have not been fully carried out and where the approval of the EPA has not been revoked;
- Site Audit Statements provided to the EPA under Section 53B of the CLM Act that relate to significantly contaminated land;
- Where practicable, copies of any documentation formerly required to be part of the public record; and
- Actions taken by the EPA under Sections 35 and 36 of the Environmentally Hazardous Chemicals Act 1985.

4.2 List of NEW contaminated Sites Notified to EPA

A search through the List of NSW Contaminated Sites notified to the EPA under Section 60 of the CLM Act 2008 was also conducted on 17 May 2021. This list is maintained by NSW EPA and includes properties on which contamination has been identified, but not deemed to be impacted significantly enough to warrant regulation. The site had not been notified as contaminated by the EPA.

4.3 POEO Public Register

A search of the Protection of the Environment Operations (POEO) Act public register, regarding environmental protection licences, applications, notices, audits, pollution studies and reduction programmes was also performed by EI. The search identified many issued records for only the property no. 82 Hughes Avenue Ermington, including environmental protection licence and licence variations with the exception of a pending surrender of a licence for chemical production waste generation and Pharmaceutical and veterinary products productions.

Table including details from the documents resulting from this search are presented in **Appendix E**.



5. Conceptual Site Model

In accordance with NEPC (2013) Schedule B2 – Guideline on Site Characterisation and to aid in the assessment of data collection for the site, EI developed a preliminary conceptual site model (CSM) assessing plausible pollutant linkages between potential contamination sources, migration pathways and receptors. The CSM provides a framework for the review of the reliability and useability of the data collected and to identify data gaps in the existing site characterisation.

5.1 Subsurface Conditions

Based on the site visits in April 2021, the subsurface conditions of the site were expected to be a fill layer, over residual soils underlain by sandstone bedrock with mangrove area along the southern boundary with Parramatta River.

The foreshore mangrove areas on the southern boundaries of the sites are likely to be estuarine sediments and are mapped as acid sulfate soils.

5.2 Potential Contamination Sources

On the basis of previous environmental investigations, site history and search findings (described in **Section 4**), El considered the potential chemical hazards and onsite contamination sources to be as follows:

Property	Potential contamination Sources			
82 Hughes Avenue	 Imported fill soils of unknown origin to be used for levelling the site; Identified asbestos impacts in the previous investigation 			
	 Impacts from current pharmaceutical manufacturing and storing activities at the site; Hazardous materials, including asbestos-containing materials (ACM); and 			
	 Potentially impacted groundwater from any potential leakages and spillages to the ground and the drain/sewage systems from the pharmaceutical manufacturing and storing activities. 			
30 Waratah	Imported fill soils of unknown origin to be used for levelling the site;			
Street	 Impacts from current industrial manufacturing and storing activities at the site; 			
	 Hazardous materials, including asbestos-containing materials (ACM) 			
	 High pressure oil pipeline buried in hope street and waratah Street (offsite source); and 			
	 Potentially impacted groundwater from any potential leakages and spillages to the ground and the drain/sewage systems from the pharmaceutical manufacturing and storing activities. 			
32 Waratah	Imported fill soils of unknown origin to be used for levelling the site;			
Street	 Impacts from previous industrial manufacturing and storing activities at the site; 			
	 Hazardous materials, including asbestos-containing materials (ACM) 			
	 High pressure oil pipeline buried in hope street and waratah Street (offsite source); and 			
	Potentially impacted groundwater from any potential leakages and spillages to the ground and the drain/sewage systems from the pharmaceutical manufacturing and storing activities.			
112 Wharf	Imported fill soils of unknown origin to be used for levelling the site;			
Road	 Impacts from current pharmaceutical manufacturing and storing activities at the site; 			
	 Hazardous materials, including asbestos-containing materials (ACM); and 			



Property Potential contamination Sources

 Potentially impacted groundwater from any potential leakages and spillages to the ground and the drain/sewage systems from the pharmaceutical manufacturing and storing activities.

5.3 Potential Contaminants

Based on the findings of the site contamination appraisal, the potential chemicals at the site were considered to be:

- Soil heavy metals (HMs including arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRH, PAH, the monocyclic aromatic hydrocarbon compounds benzene, toluene, ethylbenzene and xylenes (BTEX), organochlorine and organophosphate pesticides (OCP/OPP), polychlorinated biphenyls (PCB), Per- and poly-fluoro alkyl substances (PFAS) and asbestos.
- Groundwater heavy metals (HMs including arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRH, BTEX, PAH and volatile organic compounds (VOC; including chlorinated VOC (VOCC) and BTEX), PFAS and 1, 4-dioxane.

The investigation does not consider the wide range of specialist pharmaceutical chemicals that may have been produced at the eastern sites. Many of these are likely to be proprietary and would generally be considered to be a low risk to any property development.

5.4 Potential Sources, Exposure Pathways and Receptors

Potential contamination sources, exposure pathways and human and environmental receptors that were considered relevant for this investigation are summarised in **Table 5-1**, along with a qualitative assessment of the potential risks posed by complete exposure pathways.



Table 5-1 Preliminary Conceptual Site Model

Site Area	Subsurface Profile	Potential Sources	Potential Contaminants	Media	Sensitive Receptor	Migration & Exposure Pathways	Potential Risk of Complete Exposure Pathway
82 Hughes Avenue, Ermington	Fill soils	ACM in the fill layer	Asbestos	Fill soils	Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	Н
	Groundwater	Pharmaceutical manufacturing and storing activities and wastewater treatment facility	Heavy Metals, Petroleum Hydrocarbons (including PAHs), VOCs, PFAS and 1, 4- dioxane.	Groundwater LNAPL/DNAPL (if present)	Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	М
30 Waratah Street, Melrose NSW	Potentially impacted fill over the residual clay soils underlain with sandstone bedrock and mangroves (ASS).	Industrial activities, potential ACM in the fill layer of soils, termiticides, chemical storage depots, buried high pressure oil pipeline.	Pesticides, Heavy Metals, Petroleum Hydrocarbons (including PAHs), OCPs, PFAS and Asbestos.	Soils/Bedrock Groundwater LNAPL/DNAPL (if present)	Parramatta River, Archer Creek, Site Workers during demolition and construction Future site residents	Seepage into the subsurface soils, bedrock and groundwater. Dermal Contact Ingestion Inhalation	M
	Groundwater	Industrial and commercial activities including the wash bay, diesel tank generator and the former UST area and buried high pressure oil pipeline.	Heavy Metals, Petroleum Hydrocarbons (including PAHs), VOCs, PFAS and 1, 4-dioxane.	Groundwater LNAPL/DNAPL (if present)	Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	M
32 Waratah Street, Melrose NSW	Potentially impacted fill over the residual clay soils underlain with sandstone	Industrial activities, potential ACM in the fill layer of soils,	Pesticides, Heavy Metals, Petroleum Hydrocarbons	Soils/Bedrock Groundwater LNAPL/DNAPL (if	Parramatta River, Archer Creek, Site Workers during	Seepage into the subsurface soils, bedrock	М



Site Area	Subsurface Profile	Potential Sources	Potential Contaminants	Media	Sensitive Receptor	Migration & Exposure Pathways	Potential Risk of Complete Exposure Pathway
	bedrock and mangroves.	termiticides, historical incinerator and buried high pressure oil pipeline	(including PAHs), OCPs, PFAS and Asbestos.	present)	demolition and construction Future site residents	and groundwater. Dermal Contact Ingestion Inhalation	
	Groundwater	Industrial and commercial activities, buried high pressure oil pipeline and historical incinerator	Heavy Metals, Petroleum Hydrocarbons (including PAHs), VOCs, PFAS and 1, 4- dioxane.	Groundwater LNAPL/DNAPL (if present)	Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	М
112 Wharf Road, Melrose Park NSW	Potentially impacted fill over the residual clay soils underlain with sandstone bedrock.	Pharmaceutical manufacturing and storing activities, potential ACM in the fill layer of soils, termiticides water tank and diesel power generator.	Pesticides, Heavy Metals, Petroleum Hydrocarbons (including PAHs), OCPs, PFAS and Asbestos.	Soils/Bedrock Groundwater LNAPL/DNAPL (if present)	Parramatta River, Archer Creek, Site Workers during demolition and construction Future site residents	Seepage into the subsurface soils and bedrock. Dermal Contact Ingestion Inhalation	M
	Groundwater	Pharmaceutical manufacturing and storing activities and water tank and diesel power generator.	Heavy Metals, Petroleum Hydrocarbons (including PAHs), VOCs, PFAS and 1, 4-dioxane.	Groundwater LNAPL/DNAPL (if present)	Parramatta River, Archer Creek, Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	M

Note 1 L = Low Risk; M = Moderate Risk; H = High Risk



5.5 Data Gaps

Based on information from the site walkover inspection, previous environmental investigations and site history review, EI considered a programme of intrusive investigation was warranted to conduct targeted sampling at locations of known, potential sources of contamination (as listed in **Section 5.2**), with systematic sampling coverage in site areas where operational site history was not documented.



6. Methodology

6.1 Sampling, Analytical and Quality Plan (SAQP)

The SAQP ensured that the data collected during intrusive works at the site were representative and provided a robust basis for site assessment decisions. The SAQP included the following:

- Data quality objectives, including a summary of the objectives of the DSI;
- Investigation (sampling) methodology, including the media to be sampled, details of analytes and parameters to be monitored and a description of intended sampling points;
- Field screening methods;
- Laboratory analysis methods;
- Sample handling, preservation and storage; and
- Analytical QA/QC.

6.2 Data Quality Objectives (DQO)

In accordance with the USEPA (2006) *Data Quality Assessment* and the EPA (2017) *Guidelines for the NSW Site Auditor Scheme*, the process of developing Data Quality Objectives (DQO) was used by the EI assessment team to determine the appropriate level of data quality needed for the specific data requirements of the project. The DQO process that was applied for this investigation is documented in **Table 6-1**.



Table 6-1 Summary of Project Data Quality Objectives

DQO Steps	Details
State the Problem Summarise the contamination problem that will require new environmental data, and identify the resources available to	 The site is to be redeveloped into a mixed land use, medium to high density residential dwellings with green open space. Previous investigation, historical information and site inspection observations identified the potential for
resolve the problem; develop a conceptual site model	contamination due to various, possible sources, as listed in Section 5 .
Todano uno prosioni, do rotop a concoptadi cito inicaci	• The investigation must provide supportive information on the environmental conditions of the site to determine the site's suitability for the proposed use.
Identify the Goal of the Study (Identify the decisions)	Based on the objectives outlined in Section 1.4, the following decisions are needed:
Identify the decisions that need to be made on the contamination problem and the new environmental data	 Has the site been adequately characterised with sufficient and appropriate sampling coverage (vertical and lateral) to assess for the presence of potential contamination sources?
required to make them	 Has the nature, source and extent of any onsite impacts (soil and/or groundwater) been defined?
	 What influence do site-specific, geologic and hydrogeological conditions have on the fate and transport of any impacts that may be identified?
	 Does the degree of impacts coupled with the fate and transport of identified contaminants represent an unacceptable risk to identified human and/or environmental receptors on or offsite?
	• Does the collected data provide sufficient information to allow the selection and design of an appropriate remedial strategy, assuming remedial action is necessary? If not, what are the remaining data gaps requiring closure?
3. Identify Information Inputs (Identify inputs to decision)	Inputs to the decision making process include:
dentify the information needed to support any decision and	 Proposed development plans and intended land use;
specify which inputs require new environmental	 Previous investigation presented in Section 3.
measurements	 Areas of concern identified during the site inspection, prior to intrusive investigations.
	 National (NEPC, 2013) and State-based (NSW EPA, various) environmental guidelines.
	 Investigation results to verify the presence of onsite contamination and to evaluate the risks posed to potential, sensitive receptors.
	 Relevant COPCs (discussed in Section 5.3), to be used for laboratory analysis of selected soil and creek water samples.
4. Define the Boundaries of the Study Specify the spatial and temporal aspects of the environmental	 Lateral – The investigation will be conducted within the cadastral site boundaries, which define the extent of the investigation, as indicated on Figure A.2a & Figure A.2b in Appendix A.
nedia that the data must represent to support decision	 Vertical – Investigations will be advanced to the depth of residual soils or bedrock.
and data made agreement addition	 Temporal – The findings of this assessment will hold true for as long as the site use remains passive in nature; tha is, for as long as the site is used for the proposed use and there are no activities taking place onsite or on immediately adjacent (upgrading) properties that may compromise onsite environmental conditions.
5. Develop the Analytic Approach (Develop a decision rule)	The decision rules for the investigation were:
5. 25.5.5p the final floor approach (Borolop a docioloff fully)	 If the concentrations of contaminants in the soil and groundwater data exceed the adopted criteria; then assess the



DQO Steps	Details
To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions	need to further investigate the extent of impacts onsite. Decision criteria for QA/QC measures are defined by the Data Quality Indicators (DQI) in Table 6-2 .
6. Specify Performance or Acceptance Criteria (Specify limits on decision errors) Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data	Specific limits for this project were in accordance with National and NSW EPA guidance, and appropriate indicators of data quality and standard procedures for field sampling and handling. This included the following points to quantify tolerable limits: The null hypothesis for the investigation is that: The 95% Upper Confidence Limit (UCL) of the mean for chemicals of concern exceed land use criteria (presented in Section 6.6).
	 The acceptance of the site was based on the probability that: The 95% UCL of the mean will satisfy the given site criterion. Therefore a limit on the decision error was 5% that a conclusive statement may be incorrect. The standard deviation of the results was less than 50% of the relevant remediation acceptance criterion. No single result exceeded the land use criteria by 250% or more. Soil and groundwater concentrations for chemicals of concern that were below investigation criteria made or approved by the NSW EPA were treated as acceptable and indicative of suitability for the proposed land use(s).
7. Develop the Detailed Plan for Obtaining Data (Optimise the design for obtaining data) Identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs	 34 soil sampling locations, distributed in a mixed systematic / targeted pattern across the site. Also previously 57 sampling location were investigated as a part of WSP investigation (WSP, 2018). An upper soil profile sample was collected at each borehole location and tested for chemicals of concern, to assess the environmental condition of the fill layer, and for potential impacts from historical, above-ground activities. Further sampling was also performed in deeper soil layers. Samples were selected for analytical testing based on field observations (including visual and olfactory evidence). Collection of groundwater samples from 15 groundwater monitoring wells (12 newly installed in addition to the previously installed groundwater monitoring wells). However, nine groundwater samples were collected due to one groundwater monitoring well from the previously installed was destroyed and five of the newly installed monitoring wells were dry.



6.3 Data Quality Indicators

To ensure that the investigation data were of an acceptable quality, the investigation data set was assessed against the data quality indicators (DQI) outlined in **Table 6-2**, which related to both field and laboratory-based procedures. The assessment of data quality is discussed in **Section 7**.

Table 6-2 Data Quality Indicators

Data Quality Objective	Data Quality Indicator	Acceptable Range
Accuracy	Field – Trip blank (laboratory prepared) Laboratory – Laboratory control spike and matrix spike	< laboratory limit of reporting (LOR) Prescribed by the laboratories
Precision	Field – Blind replicate and spilt duplicate Laboratory – Laboratory duplicate and matrix spike duplicate	< 30 % relative percentage difference (RPD [%]) Prescribed by the laboratories
Representativeness	Field – Trip blank (laboratory prepared) Laboratory – Method blank	< laboratory limit of reporting (LOR) Prescribed by the laboratories
Completeness	Completion (%)	-

6.4 Sampling Rationale

With reference to the preliminary CSM described in **Section 5**, soil and groundwater investigation works were planned in accordance with the following rationale:

- Sampling from 34 test bore locations, located using a mixed systematic- / targeted-sampling pattern, to characterise in situ soils;
- Collection of five (5) samples from 1m below the hypothetical finished floor level of a twolevel basement to investigate the extent of actual or potential acid sulfate soils (ASS);
- Completion of a single groundwater monitoring event (GME), utilising the previous two groundwater monitoring wells (as one was missing) in addition to the newly installed twelve (12) monitoring wells located close to the up and down gradient site boundaries, to assess potential groundwater impacts; and
- Laboratory analysis of representative soil and groundwater samples for the identified chemicals of concern.

6.5 Investigation Constraints

This DSI was constrained by the existence of the shallow bedrock in multiple locations. Consequently five groundwater monitoring wells were dry in addition to one the wells contained a small amount of water to be tested only PFAS (30-BH104M). Also one the previously installed monitoring wells by WSP in the western property was missing due to concrete placement in the same area.



6.6 Assessment Criteria

The criteria adopted for this project are outlined in **Table 6-3**. These were selected from published guidelines that are endorsed by national and state regulatory authorities, with due consideration of the exposure scenario that is expected for various parts of the site, the likely exposure pathways and the identified potential receptors.

Table 6-3 Adopted Investigation Levels for Soil and Groundwater

Environmental Media	Adopted Guidelines	Rationale
Soil	NEPC (2013)	Soil Health-based Investigation Levels (HILs)
	Soil HILs, HSLs and Management Limits for TRHs	All samples within properties 32 Waratah Street and 112 Whar Road were assessed against the NEPC (2013) HIL-B thresholds for residential with limited access to soil land use.
		All samples within property 30 Waratah Street was assessed against the NEPC (2013) HIL-C thresholds for public open space land use
		Soil Health-based Screening Levels (HSLs)
		The NEPC (2013) Soil HSL-D thresholds for commercial and industrial sites for vapour intrusion were applied, to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene.
		Soils asbestos results were assessed against the NEPC (2013 Soil HSL thresholds for "all forms of asbestos".
		Management Limits for Petroleum Hydrocarbons
		Where the HSLs were exceeded for petroleum hydrocarbons, soil samples were assessed against the NEPC (2013) Management Limits for the TRH fractions F1 – F4 to assess propensity for phase-separated hydrocarbons (PSH), fire and explosive hazards and adverse effects on buried infrastructure
Groundwater	ANZG (2018) GILs	Groundwater Investigation Levels (GILs) for Marine Water
Groundwater	for Marine Waters	ANZG (2018) Trigger Values (TVs) for 95% level of protection of aquatic ecosystems for Marine Waters; however, the 95% TVs were applied for the bio-accumulative metals cadmium an mercury. Marine criteria were considered relevant as the close receptor was Parramatta River which is located in the immediate vicinity of the site and understood to be tidally influenced.
		Where no marine water criteria are provided the 90% level of protection of aquatic ecosystems for Fresh Waters GILs have been adopted.
	NEPC (2013)	Health-based Screening Levels (HSLs)
	Groundwater HSLs for Vapour Intrusion	The NEPC (2013) groundwater HSLs for vapour intrusion were used to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene impacts. The <i>HSL D</i> thresholds for commercial and industrial sites were applied for groundwater.
	NEPC (2013) GILs for Drinking Purposes	Drinking Water GILs The NEPC (2013) GILs for drinking water quality were applied for specific parameters where freshwater/marine GILs were no provided.



For the purposes of this investigation, the adopted soil assessment criteria are referred to as the Soil Investigation Levels (SILs) and the adopted groundwater assessment criteria are referred to as the Groundwater Investigation Levels (GILs). SILs and GILs are presented alongside the analytical results in the corresponding summary tables, which are discussed in **Section 8**.

6.7 Soil Investigation

The soil investigation works conducted at the site are described in **Table 6-4**. Test bore locations are illustrated in **Figure A.2a & Figure A.2b in Appendix A**.

Table 6-4 Summary of Soil Investigation Methodology

Activity/Item	Details
Fieldwork	The field work was conducted on 20, 21 and 22 April, 2021.
	30 Waratah Street (12 borehole locations):
	(30-BH106M) targeted the former UST area;
	 (30-BH104) targeted the generator/diesel tank;
	 (30-BH101) targeted any potential contamination from the Nylon Manufacturing area;
	(30-BH102M) targeted the wash bay; and
	 The reminder of the borehole locations was located systematically across the property.
	32 Waratah Street (7 borehole locations):
	(32-BH102) targeted the offices area;
	(32-BH103) & (32-BH106) targeted workshop/warehouse;
	 (32-BH104M) & (32-BH107M) targeted each of the incinerators; and
	 The reminder of the borehole locations was located systematically across the property.
	112 Wharf Road (13 borehole locations):
	 (112-BH106M) targeted the water tank and the diesel power generator;
	 (112-BH108), (112-BH109) & (112-BH110M) targeted the bitumen car park area which was previously used for manufacturing pharmaceutical products;
	 (112-BH110M), (112-BH111) & (112-BH112M) targeted the former manufacturing area and the diesel tank for the old generator; and
	 The reminder of the borehole locations was located systematically across the property.
	82 Hughes Avenue (2 borehole locations):
	 The main objective was to investigate the ASS/PASS material and the installation o two groundwater monitoring wells in order to furtherly assess the groundwater conditions within the property.
	All borehole locations were presented in Figure A.2a & Figure A.2b in Appendix A and discussed in Section 8.
Drilling Method and Investigation Depth	The test borehole locations were drilled using a mechanical (ute-mounted, solid flight auger drilling rig). Only one location (30-BH112) was drilled using a manuak (had auger) techniques (Appendix G).
Soil Logging	Drilled soils were classified in the field with respect to lithological characteristics and evaluated on a qualitative basis for odour and visual signs of contamination. Soil classifications and descriptions were based on Unified Soil Classification System (USCS) and Australian Standard (AS) 4482.1-2005. Bore logs are presented in Appendix G .



Activity/Item	Details
Field Observations (including visual and olfactory signs of potential contamination)	 A summary of field observations is provided, as follows: Fibre cement sheet fragments were not observed in drilling cuttings and on the surface as well. No signs of ash or charcoal materials were detected in any of the drilled boreholes. No visual signs of oil staining were observed. No suspicious odours were detected during any stage of the field investigation programme.
Soil Sampling	Soil samples were collected using a dry grab method (unused, dedicated nitrile gloves) and placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars. Blind field duplicates were separated from the primary samples and placed into glass jars. A small amount of duplicate was collected from each soil sample and placed into a ziplock bag for Photo-ionisation Detector (PID) screening. A small amount of duplicate was separated from all fill samples and placed into a ziplock bag for asbestos analysis. Two additional amount of duplicate was separated from 7mBGL (1 m below the hypothetical two level basements) at targeted five locations and placed into a zip-lock bag for ASS analysis.
Decontamination Procedures	The drilling rods and hand auger bucket were decontaminated between sampling locations with potable water until the augers were free of all residual materials.
Sample Preservation	Samples were stored in a refrigerated (ice-filled) chest, whilst on-site and in transit to the laboratory. All samples were submitted and analysed within the required holding period, as documented in laboratory reports discussed in a later section.
Management of Soil Cuttings	Soil cuttings were used as backfill for completed boreholes.
Quality Control and Laboratory Analysis	Soil samples were submitted for analysis of previously-identified COPC by SGS Laboratories (SGS). QA/QC testing comprised intra-laboratory duplicates ('field duplicates') tested blind by SGS and an inter-laboratory split field duplicate tested by Envirolab Services (Envirolab). All samples were transported under strict Chain-of-Custody (COC) conditions and COC certificates and laboratory sample receipt documentation were provided to EI for confirmation purposes, as discussed in Section 7 .
Soil Vapour Screening	Screening for potential VOCs in collected soil samples was conducted using a Photo-ionisation Detector (PID), fitted with a 10.9 eV lamp, which was calibrated immediately prior to sampling. PID results were low, ranging from 0.1 to 2.3 ppm. PID readings for each sample from the test boreholes are presented in the test borehole logs (AppendiG I) and field notes (Appendix H). The PID calibration certificate is included in the field date sheets in Appendix F .

6.8 Groundwater Investigation

The groundwater investigation works conducted at the site are described in **Table 6-5**. Monitoring well locations are illustrated in **Figure A.2a & Figure A.2b in Appendix A**.

Table 6-5 Summary of Groundwater Investigation Methodology

	,		
Activity/Item	Details		
Fieldwork	Groundwater monitoring wells we	ere installed and developed on	during the drilling



Activity/Item	Details
	works which were completed on 20, 21 and 22 April 2021. Water level gauging, well purging, field testing and sampling were conducted on 30 April 2021.
Well Construction	Test bores were converted to groundwater monitoring wells as follows:
	82-BH101M, 2.0m deep, down-gradient well targeting drum store;
	82-BH102M, 5.8m deep, down-gradient well targeting manufacturing area;
	30-BH102M, 4.55m deep, up-gradient well;
	30-BH106M, 6.4m deep, down-gradient well targeting former UST area;
	30-BH110M, 7.5m deep, down-gradient well;
	30-BH111M, 7.6m deep, down-gradient well;
	32-BH104M, 1.6m deep, down-gradient well targeting an incinerator;
	32-BH107M, 2.1m deep, down-gradient well targeting an incinerator;
	 112-BH106M, 2.2m deep, down-gradient well targeting the water tank and diesel power generator;
	 112-BH110M, 1.4m deep, down-gradient well targeting manufacturing area;
	 112-BH112M, 1.5m deep, down-gradient well targeting diesel tank for old generator;
	■ 112-BH113M, 4.3m deep, up-gradient well; and
	Drilled by HartGEO Pty Ltd using a ute mounted, solid flight auger rig. Well construction details are tabulated in Table 9-2 and documented in the bore logs presented in Appendix G .
Well Construction (continued)	Well construction was in general accordance with the standards described in NUDLC (2012) and involved the following:
(,	 50mm, Class 18 uPVC, threaded, machine-slotted screen and casing, with slotted intervals set to screen to at least 500mm above the standing water level to allow sampling of phase-separated hydrocarbon product, if present;
	base and top of each well was sealed with a uPVC cap;
	 annular, graded sand filter was used to approximately 500mm above top of screen interval;
	 granular bentonite was applied above annular filter to seal the screened interval;
	 drill cuttings were used to backfill the bore annulus to just below ground level; and
	 surface completion comprised a steel road box cover, set in neat cement and finished flush with the concrete slab level for all installed groundwater monitoring wells.
Well Development	Well development was conducted directly following installation. This involved agitation and water removal within the full length of the water column using a dedicated, HDPE, disposable bailer. Bailing was continued until dry.
Well Survey (Elevation and Location)	Well elevations were surveyed in metres relative to Australian Height Datum (m AHD) and marked on the survey plan provided by the client .
Well Gauging and Groundwater Flow Direction	All monitoring wells were gauged for standing water level (SWL) prior to purging at the commencement of the GME on 30 April, 2021. All measured SWLs are shown in Table 9-2 . A transparent HDPE bailer was used to visually assess for the presence PSH prior to the commencement of well purging. PSH was not detected in any well.
	Based on the reduced water levels (RWLs, i.e. SWLs corrected to AHD) calculated for each monitoring well (Table 9-3), groundwater level contours were interpreted for the site as shown in Figure A.3a & Figure A.3b in Appendix A . The direction of groundwater flow was inferred to be:



Activity/Item **Details** 82 Hughes Avenue: in a southeast direction; • 30 Waratah Street: in a south direction; 32 Waratah Street: in a south to south west direction; and 112 Wharf Road: in a south west direction. Well Purging & Field No volatile organic odours were detected during any stage of well purging. Testing Measurement of water quality parameters was conducted repeatedly during well purging and were recorded onto field data sheets (Appendix H) once water quality parameters stabilised. In all tested wells groundwater was initially observed to be brown/grey in colour with suspended sediments (SS). Field measurements for dissolved oxygen (DO), electrical conductivity (EC), reduction-oxidation potential (redox), temperature and pH were also recorded during purging. Purged water volumes removed from each well and field test results are summarised in Table 9-Groundwater sampling All groundwater monitoring wells were purged and sampled using low-flow/minimal draw down sampling method with a MicroPurge kit (MP15) and a portable MicroPurge pump following well gauging. The MicroPurge system incorporated a low density poly-ethylene (LDPE) pump bladder, and a Teflon-lined LDPE sample delivery tube. The system used for this investigation employed pressurised carbon dioxide gas to regulate groundwater flow. Pump pressure and pumping cycles were adjusted accordingly to regulate extraction flow rate, and to avoid causing excessive drawdown of water level during the sampling process. Field measurement of water quality parameters was conducted continuously on purged groundwater with a water quality meter (Hanna Multi Parameter 9829) positioned within an open flow-through cell. The measured parameters were recorded onto a field data sheet (Appendix H), along with the purged water volume at the time of measurement. Groundwater sampling was performed when three consecutive readings of groundwater parameter indicated stabilisation; as per the specified ranges detailed below: ■ Temperature: ± 0.2°C Electrical Conductivity: ± 3% of the read value; Redox: ± 20 mV; ■ DO: ± 10% of the read value; and pH: ± 0.2 pH unit. Total water volume purged and stabilised groundwater parameters at each groundwater monitoring well are summarised in Table 9-3. Decontamination Decontamination was not required as the sampling equipment was stored and Procedure transported prior to use in factory-sealed, plastic sleeves, while each bailer was dedicated to each individual well. All sample containers were supplied by the laboratory for the particular project and only opened once immediately prior to sampling. While ice was used to keep the samples cool, all melt water was continuously drained from the esky to prevent cross-contamination of samples. The water level probe and water quality kit probes were washed in a solution of potable water and Decon 90, then rinsed with potable water between measurements/wells. Sample Preservation Sample containers were supplied by the laboratory with the following preservatives:



Activity/Item	Details
	one, 1 litre amber glass, acid-washed and solvent-rinsed bottle;
	one, 500mL plastic bottle for PFAS sampling;
	 four, 40ml glass vials, pre-preserved with dilute hydrochloric acid, Teflon-sealed; and
	 one, 125mL, HDPE bottle, pre-preserved with dilute nitric acid (1 mL).
	Samples for metals analysis were field-filtered using 0.45µm pore-size filters. All containers were filled with sample to the brim then capped and stored in ice-filled chests, until completion of the fieldwork and during sample transit to the laboratory.
Quality Control & Laboratory Analysis	All groundwater samples were submitted for analysis of previously-identified chemicals of concern by SGS. QA/QC testing comprised intra-laboratory duplicates ('field duplicates') tested blind by SGS and an inter-laboratory split field duplicate tested by Envirolab. All samples were transported under strict COC conditions and COC certificates and laboratory sample receipt documentation were provided to EI for confirmation purposes.
Sample Transport	After sampling, refrigerated sample chests were transported to SGS using strict Chain-of-Custody (COC) procedures. Inter-laboratory duplicate (ILD) samples were forwarded to Envirolab for QA/QC analysis. A Sample Receipt Advice (SRA) was provided by each laboratory to document sample condition upon receipt. Copies of SRA and COC certificates are presented in Appendix I .



7. Data Quality Assessment

The assessment of data quality is defined as the scientific and statistical evaluation of data to determine if they meet the objectives for the project (USEPA 2006). Data quality assessment included an evaluation of the compliance of the field sampling and laboratory analytical procedures, as well as an assessment of the accuracy and precision of these data from the field (blind and split) duplicates and laboratory quality control measurements. The findings of the data quality assessment in relation to the current investigation at the site are discussed in detail in **Appendix K**.

The QC measures generated from the field sampling and laboratory analytical program are summarised in **Table 7-1**:

Table 7-1 Quality Control Process

Data Quality	Control	Conformance [Yes, Part, No]	Report Sections
Preliminaries	Data Quality Objectives established	Yes	See DQO/DQI
Field work	Suitable documentation of fieldwork observations including borehole logs, sample register, field notes, calibration forms	Yes	See Appendices
Sampling Plan	Use of relevant and appropriate sampling plan (density, type, and location)	Yes	See sample rationale
	All media sampled and duplicates collected	Yes	Soil vapour not required
	Use of approved and appropriate sampling methods (soil, groundwater, air quality)	Yes	See methodology (Air quality was not required)
	Selection of soil samples according to field PID readings (where VOCs are present)	Yes	See methodology
	Preservation and storage of samples upon collection and during transport to the laboratory	Yes	See methodology
	Appropriate Rinsate, Field and Trip Blanks taken	Yes	See methodology
	Completed field and analytical laboratory sample COC procedures and documentation	Yes	See laboratory reports
Laboratory	Sample holding times within acceptable limits	Yes	See laboratory QA
	Use of appropriate analytical procedures and NATA-accredited laboratories	Yes	See laboratory report
	LOR/PQL low enough to meet adopted criteria	Yes	See laboratory appendix
	Laboratory blanks	Yes	See laboratory QA/QC
	Laboratory duplicates	Yes	See laboratory QA/QC



Data Quality	Control	Conformance [Yes, Part, No]	Report Sections
	Matrix spike/matrix spike duplicates (MS/MSDs)	Yes	See laboratory QA/QC
	Surrogates (or System Monitoring Compounds)	Yes	See laboratory QA/QC
	Analytical results for replicated samples, including field and laboratory duplicates and inter-laboratory duplicates, expressed as Relative Percentage Difference (RPD)	Yes	See QA Tables Appendices
	Checking for the occurrence of apparently unusual or anomalous results, e.g. laboratory results that appear to be inconsistent with field observations or measurements	Yes	See Appendices
Reporting	Report reviewed by senior staff to assess project meets desired quality, EPA guidelines and project outcomes.	Yes	See document control

7.1 Quality Overview

On the basis of the field and analytical data validation procedure employed, the overall quality of the analytical data produced for the site was considered to be of an acceptable standard for interpretive use and preparation of a conceptual site model (CSM).



8. Results

8.1 Soil Investigation Results

8.1.1 Site Geology and Subsurface Conditions

The general site lithology encountered during the drilling of the boreholes and installation of monitoring wells may be described as a layer of filling overlying residual clay, with Sandstone bedrock at depth along with the mangroves followed by Parramatta river located at the southern boundary of the site. The geological information obtained during the investigation is summarised in **Table 8-1** and borehole logs from these works are presented in **Appendix G**.



Table 8-1 Generalised Subsurface Profile (m bgl)

Layer	Description	Depth to top and bottom of layer (m bgl)					
		82 Hughes Avenue, Ermington	30 Waratah Street, Melrose Park	32 Waratah Street, Melrose Park	112 Wharf Road, Ermington		
Concrete slab	-	-	0.0-0.15	-	0.0-0.2		
Asphalt	-	-	0.0-0.3	-	0.0-0.04		
Fill	Gravelly Sand; fine to coarse grained, dark brown, with fine to coarse grained and subangular to angular gravels, with a trace of brick fragments, dry, no odour. Gravelly Sandy Clay; medium plasticity, brown, with fine to coarse grained sand, with fine grained gravels, no odour. Sandy Clay; medium plasticity, orange brown, with fine to coarse grains, moist, no odour. Silty Clay; medium plasticity, red/orange mottled brown, with a trace of fine to coarse grained sandstone gravel, moist, no odour. Silty Sand; fine to coarse grained, red, moist, no odour. Silty Clayey Sand; fine to coarse grained, dark brown, with fine to coarse grained sand, moist, no odour. Crushed Sandstone; extremely weathered, orange/ grey, dry, no odour.	0.0 – 4.2	0.0-6.4+	0.0 – 1.0	0.0-1.7		
Natural soils	Sandy silty Clay; medium plasticity, dark brown/dark grey, with fine to coarse grained sand, wet, organic odour. Silty Clay; low plasticity; grey mottled orange, moist, stiff, no odour. Peaty Clayey Sand; fine grained, dark grey, with a trace of shell fragments, wet, no odour. Clay; high plasticity, grey mottled orange, with shell fragments, wet, sulfur odour. Gravelly Sand (weathered Sandstone); fine to coarse grained, light orange/grey, with fine to coarse grained and sub-rounded sandstone gravel, dry, no odour.	-	1.1-7.6+	0.2 – 2.1+	0.2-2.2		
Bedrock	Sandstone; extremely weathered, orange, no odour. Shale; extremely weathered, grey, no odour.	1.7–5.8+	1.7/5.1+	1.6/2.0/2.1+	0.6-3.0/2.2+ 3.0-4.3+		



Note 1 + Termination depth of borehole. Note 2 For each individual borehole details, see **Appendix G**

8.1.2 Field Observations and PID Results

Soil samples were obtained from the test bores at various depths ranging between 0.1m to 7.0mBGL. All examined soil samples were evaluated on a qualitative basis for odour and visual signs of contamination (e.g. hydrocarbon odours, oil staining, petrochemical filming, asbestos fragments, ash, and charcoal) and the following observations were noted:

- No visual or olfactory evidence of hydrocarbon impacts were noted at any of the borehole locations;
- Organic and sulfur odour was observed in the deep borehole location at 30 Waratah Street
- Some minor brick fragments were noted in the fill layers;
- Asbestos cement sheeting was not observed in the examined in situ fill soils; and
- Low VOC readings were identified by the PID screening of the soil headspace samples, ranging from 0.1 to 2.3 parts per million (ppm). The PID results are shown in the borehole logs (Appendix G). The samples showing slightly higher PID values were therefore assigned for laboratory analysis.

8.2 Groundwater Investigation Results

8.2.1 Monitoring Well Construction

A total of 12 groundwater monitoring wells were installed across the site in addition to the three previously installed groundwater monitoring wells. Well construction details for the installed groundwater monitoring wells are summarised in **Table 8-2**.

Table 8-2 Monitoring Well Construction Details

		-			
Well ID	Bore Depth (m bgl)	RL (GL)	RL (TOC)	Screen Interval (m bgl)	Lithology Screened
30-BH102M	4.55	4.68	4.432	1.55-4.55	Fill
30-BH106M	6.40	4.375	4.245	2.00-5.00	Fill
30-BH110M	7.50	4.435	4.355	4.50-7.50	Clay/Peaty Clayey Sand
30-BH111M	7.60	4.572	4.472	4.60-7.60	Clay/Peaty Clayey Sand
32-BH104M	1.60	7.728	7.648	1.00-1.60	Weathered Sandstone
32-BH107M	2.10	6.741	6.641	1.00-2.10	Clay/Weathered Sandstone
112-BH106M	2.20	8.100	7.970	1.70-2.20	Weathered Sandstone
112-BH110M	1.40	7.800	7.680	0.90-1.40	Silty Sand
112-BH112M	1.50	8.835	8.715	0.60-1.50	Weathered Sandstone
112-BH113M	4.30	13.235	13.115	1.30-4.30	Weathered Sandstone/Shale
82-BH101M	2.00	5.838	5.718	1.50-2.00	Fill/Sandstone
82-BH102M	5.80	5.466	5.386	3.80-5.80	Fill/Sandstone
MW01 (GSK)	5.50	2.490	2.370	3.50-5.50	Weathered Sandstone/Sandy Clay
MW03 (GSK)	9.00	14.443	14.363	7.00-9.00	Sandy Clay

Note 1 m bgl = metres below ground level.



Note 2 RL = Reduced Level – Surveyed elevation in metres relative to Australian Height Datum (m AHD). Note 3 TOC = top of well casing.

Note 4 RL (TOC) = Surveyed elevation at TOC in m AHD.

8.2.2 Field Observations and Water Test Results

A single GME was conducted on all wells on 30 April, 2021. Standing water levels (SWLs) were measured within each well prior to well purging, the results of which were recorded with well purge volumes and field-based water test results. A summary of the recorded field data is presented in **Table 8-3** and copies of the completed Field Data Sheets are included in **Appendix H**.

Table 8-3 Groundwater Field Data (GME date 30 April 2021)

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Well ID	SWL (mBTOC)	RL (TOC)	WL (mAHD)	Purge Vol (L)	DO (mg/L)	Field pH	Field EC (μS/cm)	Temp (°C)	Redox (mV)	Odour Turbidit Y
30-BH102M	2.32	4.432	2.112	2.0	0.43	6.09	1,629	21.10	270.6	None / High
30-BH106M	3.08	4.245	1.165	2.5	0.22	6.80	3,006	19.59	199	None / High
30-BH110M	3.09	4.355	1.265	2.5	0.00	6.01	54,380	19.66	239.2	None / High
30-BH111M	3.27	4.472	1.202	2.5	0.00	7.06	23,000	20.17	111.3	None / High
32-BH104M	Dry	7.648	-	-	-	-	-	-	-	-
32-BH107M	Dry	6.641	-	-	-	-	-	-	-	-
112-BH106M	Dry	7.970	-	-	-	-	-	-	-	-
112-BH110M	Dry	7.680	-	-	-	-	-	-	-	-
112-BH112M	Dry	8.715	-	-	-	-	-	-	-	-
112-BH113M	3.20	13.11 5	9.915	1.5	0.59	5.91	596	20.57	319.7	None / High
82-BH101M	Dry	5.718	-	-	-	-	-	-	-	-
82-BH102M	4.07	5.386	1.316	2.5	0.48	5.49	3,077	20.06	310.5	None/ Med.
MW01 (GSK)	1.25	2.370	1.12	2.0	0.98	6.64	664	19.02	250.6	None / High
MW03 (GSK)	3.83	14.36 3	10.533	3.5	0.62	4.68	3,942	20.07	279.4	None / High

Notes:

SWL – Standing Water Level, as measured from TOC (top of well casing) prior to groundwater sampling. m BTOC – metres below top of well casing.

RL (TOC) - Reduced Level, elevation at TOC in metres relative to Australian Height Datum (m AHD).

With reference to **Table 8-3**, the field pH data indicated that the groundwater was acidic to neutral (pH ranged from 5.49 to 7.06) with the exception of MW03 which was reported as a pH of 4.68. Electrical Conductivity (EC) measurements were in the range 1,629 to 54,380 μ S/cm (with the exception of 112-BH113M (596) and MW01(GSK) (664 μ S/cm)) indicating that the groundwater was brackish to saline in terms of water salinity.



[†] WL = Calculated groundwater level, in m AHD (calculated as RL – SWL).

L – litres (referring to volume of water purged from the well prior to groundwater sample collection).

8.3 Laboratory Analytical Results

8.3.1 Soil Analytical Results

A summary of laboratory results showing test sample quantities, minimum/maximum analyte concentrations and samples found to exceed the SILs, is presented in **Table 8-4**. More detailed tabulation of results showing the tested concentrations for individual samples alongside the adopted soil criteria are presented in **Table B1** at the end of this report.

Table 8-4 Summary of Soil Analytical Results

No. of primary samples	Analyte	Min. Conc. (mg/kg)	Max. Conc. (mg/kg)	Sample locations exceeding investigation levels
Hydrocarbons	S			
58	TRH C6-C10 minus BTEX (F1)	<25	<25	None
58	TRH >C10-C16 - Naphthalene (F2)	<25	27	None
58	TRH >C16-C34 (F3)	<90	240	None
58	TRH >C34-C40 (F4)	<120	300	None
ВТЕХ				
58	Benzene	<0.1	<0.1	None
58	Toluene	<0.1	<0.1	None
58	Ethyl benzene	<0.1	<0.1	None
58	Total xylenes	<0.3	<0.3	None
PAH				
58	Naphthalene	<0.1	<0.1	None
58	Benzo(a)pyrene	<0.1	0.9	None
58	Carcinogenic PAHs (B(α)P TEQ)	<0.3	1.4	None
58	Total PAHs	<0.8	7.9	None
Heavy Metal				
60	Arsenic	2	2,300	30-BH101_4.4-4.5, 30-BH101_5.4-5.5 & 30-BH102M_2.0-2.1
58	Cadmium	<0.3	17	None
58	Chromium (Total)	2.4	160	None
58	Copper	3.6	1,400	30-BH101_4.4-4.5, 30-BH106M_1.1-1.2, 30-BH106M_3.4-3.5 & 32-BH106_1.4-1.5



No. of primary samples	Analyte	Min. Conc. (mg/kg)	Max. Conc. (mg/kg)	Sample locations exceeding investigation levels
60	Lead	2	1,600	30-BH101_4.4-4.5
58	Mercury	<0.05	4.7	None
58	Nickel	1	68	None
58	Zinc	9.8	2,700	30-BH101_4.4-4.5, 30-BH106M_0.3-0.4, 30-BH106M_1.1-1.2, 30-BH106M_1.9-2.0 & 30-BH107_0.3-0.4
PFAS				
13	PFOS/PFHxS	<0.0016	0.0098	None
13	PFOA	<0.0008	0.0073	None
Pesticides				
22	OCPs	<1	<1	None
22	OPPs	<1.7	<1.7	None
PCBs				
22	Total PCBs	<1	<1	None
Asbestos				
58	Asbestos	No detection	No detection	None

With reference to **Table B1**, all tested soil results were below the corresponding health based SILs for residential with minimal soil access land use and public open space land use, with the exception of the following properties no. 30 and 32 Waratah Street which showed some elevated heavy metals higher than the criteria:

30 Waratah Street:

- Sample 30-BH101 4.4-4.5:
 - arsenic (2,300 mg/kg) exceeded HIL-C and the ecological criteria;
 - copper (1,400 mg/kg) exceeded the ecological criteria;
 - lead (1,600 mg/kg) exceeded HIL-C and the ecological criteria; and
 - > zinc (1,300 mg/kg) exceeded the ecological criteria.
- Sample 30-BH101_5.4-5.5
 - arsenic (310 mg/kg) exceeded HIL-C and the ecological criteria
- Sample 30-BH102M_2.0-2.1
 - arsenic (200 mg/kg) exceeded the ecological criteria
- Sample 30-BH106M_0.3-0.41



- copper (520 mg/kg) exceeded the ecological criteria
- Sample 30-BH106M_1.1-1.2
 - copper (600 mg/kg) exceeded the ecological criteria; and
 - zinc (2,700 mg/kg) exceeded the ecological criteria
- Sample 30-BH106M_1.9-2.0
 - zinc (700 mg/kg) exceeded the ecological criteria
- Sample 30-BH106M_3.4-3.5
 - copper (290 mg/kg) exceeded the ecological criteria
- Sample 30-BH107_0.3-0.4
 - zinc (820 mg/kg) exceeded the ecological criteria

32 Waratah Street:

- Sample 32-BH106_1.4-1.5
 - copper (710 mg/kg) exceeded the ecological criteria

All data are tabulated and summarised in Appendix B, Table B1.

8.3.2 Groundwater Analytical Results

Laboratory analytical results for groundwater samples are summarised in **Table B2**, which also include the adopted GILs for marine waters. More detailed discussion showing each tested individual samples showing elevated concentration alongside the exceeded criteria are presented below for each property.

82 Hughes Avenue:

Heavy Metals

- GW-82-BH102M-1:
 - copper (5µg/L);
 - nickel (37µg/L); and
 - zinc (850µg/L);
- GW-EI-MW01-1:
 - copper (7µg/L);
 - nickel (12µg/L); and
 - zinc (50µg/L);
- GW-EI-MW03-1:
 - copper (21µg/L);
 - nickel (79µg/L); and
 - zinc (1,400μg/L);

TPHs, BTEX, PAHs, (1,4 Dioxane), PFAS and VOCs

All concentrations for the tested samples were below the laboratory detection limit and consequently below the adopted criterion.



30 Waratah Street:

Heavy Metals

- GW-30-BH102M-1:
 - copper (15µg/L);
 - arsenic (80µg/L); and
 - zinc (83µg/L);
- GW-30-BH106M-1:
 - copper (9µg/L);
 - nickel (11µg/L); and
 - zinc (99µg/L);
- GW-30-BH110M-1:
 - copper (6μg/L); and
 - zinc (580µg/L);
- GW-30-BH111M-1:
 - zinc (45µg/L);

TPHs, BTEX, PAHs, (1,4 Dioxane) and VOCs

TRH, VOC (including VOCC and BTEX) and PAH concentrations were below the corresponding laboratory detection limit and/or GIL with the exception of sample GW-30-BH102M-1 which showed cis-1,2-dichloroethene (11 μ g/L), however, it is below the adopted criteria for drinking water.

PFAS

All concentrations for the tested samples were below the adopted criteria with the exception of:

■ Sample GW-30_BH111M-1 was reported showing a PFOS concentration of (29µg/L) which exceeded the adopted criteria.

32 Waratah Street:

All monitoring wells were dry in this property except the groundwater monitoring well (32-BH104M) which contained a quantity of groundwater enough as PFAS sample only.

The tested sample was below the adopted criterion.

112 Wharf Road:

Heavy Metals

```
GW-112-BH113M-1:
copper (15µg/L);
nickel (8µg/L); and
zinc (350µg/L).
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TPHs, BTEX, PAHs, (1,4 Dioxane), PFAS and VOCs

All concentrations for the tested sample were below the laboratory detection limit and consequently below the adopted criterion.



8.3.3 Acid Sulfate Soils Analytical Results

The representative soil samples collected from properties 82 Hughes Avenue and 30 Waratah Street were analysed for the parameters recommended under the ASS Assessment Guidelines (Ahern, et al., 1998), to confirm the presence or absence of ASS.

For properties at 32 Waratah Street and 112 Wharf Road, bedrock was encountered between 0.9-1.7mBGL. Therefore, ASS is a low probability.

All laboratory analyses were conducted on discrete (un-composited) samples using NATA-registered methods. Results are summarised in **Table B3** and presented in more detail in a copy of the laboratory analytical report, which is provided in **Appendix J**.

pН

The pH and EC results were both conducted on 1:5 soil/water extracts. For all samples, pH was above 4, the threshold below which actual ASS are indicated. This suggests that no previous oxidation of sulfides has taken place so as to result on potential formation of sulfuric acid conditions.

It is well known that various natural constituents other than sulfide (e.g. organic matter, iron and manganese minerals) are also able to react with the peroxide, leading to the generation of acid. Indeed, such constituents, especially organic matter, were expected to be present in the examined soils, which may have accounted for the observed reduction in pH levels following oxidation (Ahern et al., 1998; EPA, 1995). Confirmatory analysis using the sPOCAS method was thus necessary to verify the presence and extent of any potential ASS.

Non-Oxidised and Oxidised pH Testing

Non-oxidised (KCI) pH testing and oxidised (Ox) pH testing were conducted. Laboratory results showed that all samples tested for (Ox) pH were well above 3.5, while pH (KCI) was also well above 4. Hence, no actual acid sulfate soils (AASS) were considered present on site.

sPOCAS

Suspended peroxide oxidation combined acidity (sPOCAS) and sulfate testing was conducted on samples at property 82 Hughes Avenue and 30 Waratah Street from 7mBGL (below the hypothetical two level basement).

82 Hughes Avenue:

The tested sample showed peroxide oxidisable sulfur (SPOS) result (<0.005%) was found to be below the Action Criterion for coarse textured soil (0.03% w/w where less than 1,000 tonnes of soil are to be excavated). In addition, the potential acid risk from un-oxidised sulfur compounds was considered to be low as each "acid trail" detected only low levels of actual (TAA) and low potential acidities (TPA), leading to the concentration of total sulfidic acidity (TSA) being reported at less than 5 moles H+ per tonne of soil for all tested samples (the corresponding Action Criterion for fine textured soil is 18 mol H+/tonne).

Potential effects of the proposed development

Given that actual and potential ASS were not detected at 7m BGL there is a low probability that ASS conditions will be generated during the proposed development works.

30 Waratah Street:

Two out of four samples were tested showing peroxide oxidisable sulphur (SPOS) exceeding the criteria (0.03%). However, the potential acid risk from un-oxidised sulphur compounds was considered to be low as each "acid trail" detected only low levels of actual (TAA) and low potential acidities (TPA), leading to the concentration of total sulfudic acidity (TSA) being reported at less than 5 moles H+ per tonne of soil for all tested samples (the corresponding Action Criterion for fine textured soil is 18 mol H+/tonne)



Potential effects of the proposed development

Potential ASS is expected down to 7m BGL and there is a risk that ASS will be disturbed during the proposed development works. Additional ASS assessment should to be carried out post-demolition.



9. Site Characterisation

9.1 Review of Conceptual Site Model

On the basis of investigation findings, the preliminary CSM discussed in **Section 5** has been refined and is summarised in **Table 5-1**, along with a qualitative assessment of the potential risks posed by complete exposure pathways.

Table 10-1 Refined Conceptual Site Model

Site Area	Potential Sources	Potential Contaminants	Media	Sensitive Receptor	Migration & Exposure Pathways	Potential Risk of Complete Exposure Pathway
82 Hughes Avenue, Ermington	Deleterious materials from the former buildings and impacted fill soils	Asbestos	Fill soils	Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	M
	off-site source	Heavy metals	Ground- water	Parramatta River Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	L
30 Waratah Street	Deleterious materials from the former buildings and impacted fill soils	heavy metals	Fill soils	Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	M
	off-site source and/or onsite source	Heavy metals and PFAS	Ground- water	Parramatta River Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	М-Н
32 Waratah Street & 112 Wharf	off-site source and/or onsite source	Heavy Metals, Petroleum Hydrocarbons (including	Groundw ater	Site Workers during demolition and	Dermal Contact Ingestion	L-M



Site Area	Potential Sources	Potential Contaminants	Media	Sensitive Receptor	Migration & Exposure Pathways	Potential Risk of Complete Exposure Pathway
Road, Melrose Park NSW		PAHs), VOCs, PFAS and 1, 4- dioxane.		construction Future site residents	Inhalation	
112 Wharf Road, Melrose Park NSW	Deleterious materials from the former activities and impacted fill soils	Heavy metals	Soils	Site Workers during demolition and construction Future site residents	Dermal Contact Ingestion Inhalation	L-M
112 Wharf Road, Melrose Park NSW	Off-site source Former site activities	Heavy Metals	Soils/ Bedrock	Parramatta River Site Workers during demolition and construction Future site residents	Seepage into the subsurface soils, bedrock and groundwater. Dermal Contact Ingestion Inhalation	M

Note 1 L = Low Risk; M = Moderate Risk; H = High Risk

9.2 Data Gaps

Based on the refined CSM derived for the site post investigation, the following data gap has been identified:

- The lateral and vertical extent of the contamination underneath the existing buildings across the eastern part of the site which includes 30-32 Waratah Street and 112 Wharf Road, Melrose Park;
- The groundwater conditions in property no. 32 Waratah Street as many of the wells where dry.

It is considered that this data gap can be adequately closed through implementation of recommendations included within **Section 11**.



10. Conclusions

The property located at 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park, NSW was the subject of a Detailed Site Investigation, which was conducted in order to assess the nature and degree of on-site contamination associated with current and former industrial uses of the land. Based on the findings of this DSI it was concluded that:

- The site had mainly been used for industrial purposes.
- The sub-surface layers of the site were comprised of fill materials, overlying residual clays and sandstone bedrock.
- 82 Hughes Avenue:
 - Multiple environmental investigations have been completed and identified localised asbestos contamination impacts in 82 Hughes Avenue Ermington which is summarised in Section 3.
 - Acid Sulfate Soils screening assessment showed low probability of ASS.
 - Groundwater SWLs were at depths ranging from 1.37 to 3.91 meters below.
 - Results for the groundwater samples were all below the adopted GILs, with the exception of copper, nickel and zinc which is representative of the background conditions

30 Waratah Street:

- All contaminants were below the adopted criteria with the exception of heavy metals reported concentrations which were above the adopted criteria.
- Acid Sulfate Soils screening assessment showed a risk of ASS. Additional ASS assessment should to be carried out post-demolition.
- Groundwater SWLs were at depths ranging from 2.45 to 3.37 meters below ground level.
- Results for the groundwater samples were all below the adopted GILs, with the exception of copper, nickel, arsenic and zinc which is representative of the background conditions
- Sample GW-30_BH111M-1 showed an elevated concentration of PFOS (29μg/L) which exceeded the adopted the criteria (0.13μg/L)

32 Waratah Street:

- All contaminants were below the adopted criteria with the exception of sample 32-BH106_1.4-1.5 which reported a zinc concentration above the adopted criteria.
- Acid Sulfate Soils screening assessment showed low probability of ASS due to the shallow bedrock.
- All groundwater monitoring wells were dry except monitoring well 32-BH104M which contained a SWL of 1.36 mBGL.



Results for the groundwater sample were limited amount and tested only for PFAS. The lab results showed concentrations below the adopted criteria.

112 Wharf Road:

- All contaminants were below the adopted criteria.
- Acid Sulfate Soils screening assessment showed low probability of ASS due to the shallow bedrock.
- All groundwater monitoring wells were dry except monitoring well 112-BH113M which contained a SWL of 3.32 mBGL.
- Results for the groundwater sample were all below the adopted GILs, with the exception of copper, nickel and zinc which is representative of the background conditions

Based on the findings of this DSI and with consideration of the Statement of Limitations (**Section 12**), EI concluded that widespread contamination was not present at the site. The site can be made suitable for the proposed development, subject to addressing the recommendations listed in **Section.11**.



11. Recommendations

In view of the findings of this investigation and in accordance with the NEPC (2013) guidelines, it is considered that the site can be made suitable for the proposed mixed land use, medium to high density residential dwellings with green open space on completion of the following recommendations:

- Preparation and implementation of a Remediation Action Plan (RAP). The RAP should include, but not necessarily be limited to, the following:
 - Preparation and implementation of a Remediation Action Plan (RAP), to address the fill soil contamination.
 - The RAP should also address the reported groundwater exceedances to confirm the quality of the groundwater.
 - A plan for validation works to confirm the sites environmental condition following remedial works; and
 - Procedures to deal with any unexpected finds identified during construction.
- The preparation and implementation of Asbestos Management Plan (AMP), in order to outline control measures that are required to prevent exposure of site personnel to any type of asbestos.
- A Waste Management Plan should be prepared in accordance with City of Parramatta Council DCP guidelines which should include:
 - Classification of all waste material to be removed from the site in accordance with the EPA (2014) Waste Classification Guidelines, Protection of the Environment Operations Act 1997, and Work Health and Safety Regulation 2017;
 - Assessment of any soil/fill material imported onto the site. Imported soil must:
 - be classified as virgin excavated natural material (VENM); or
 - have a classification certificate indicating it is suitable for the propsed land use.
- Preparation of a final site validation report by a qualified environmental consultant, certifying site suitability for the proposed development.



12. Statement of Limitations

The findings presented in this report are the result of discrete and specific sampling methodologies used in accordance with best industry practices and standards. Due to the site-specific nature of soil sampling from point locations, it is considered likely that all variations in subsurface conditions across a site cannot be fully defined, no matter how comprehensive the field investigation program.

While normal assessments of data reliability have been made, EI assumes no responsibility or liability for errors in any data obtained from previous assessments conducted on site, regulatory agencies (e.g. Council, EPA), statements from sources outside of EI, or developments resulting from situations outside the scope of works of this project.

Despite all reasonable care and diligence, the ground conditions encountered and concentrations of contaminants measured may not be representative of conditions between the locations sampled and investigated. In addition, site characteristics may change at any time in response to variations in natural conditions, chemical reactions and other events, e.g. groundwater movement and or spillages of contaminating substances. These changes may occur subsequent to El's investigations and assessment.

El's assessment is necessarily based upon the result of the site investigation and the restricted program of surface and subsurface sampling, screening and chemical testing which was set out in the proposal. Neither El, nor any other reputable consultant, can provide unqualified warranties nor does El assume any liability for site conditions not observed or accessible during the time of the investigations.

This report was prepared for the above named client and no responsibility is accepted for use of any part of this report in any other context or for any other purpose or by other third parties. This report does not purport to provide legal advice.

This report and associated documents remain the property of EI subject to payment of all fees due for this assessment. The report shall not be reproduced except in full and with prior written permission by EI.



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Abbreviations

ACM Asbestos-containing materials

ASS Acid sulfate soils

AST Above-Ground Storage Tank

ANZECC Australian and New Zealand Environment Conservation Council

ARMCANZ Agriculture and Resource Management Council of Australia and New Zealand B(a)P Benzo(a)Pyrene (a PAH compound), - B(a)P TEQ Toxicity Equivalent Quotient

BH Borehole

BTEX Benzene, Toluene, Ethylbenzene, Xylene

COC Chain of Custody

cVOCs Chlorinated Volatile Organic Compounds (a sub-set of the VOC analysis suite)

DA Development Application

DO Dissolved Oxygen
DP Deposited Plan
EC Electrical Conductivity
Eh Redox potential

EPA Environment Protection Authority NSW

F1 TRH $C_6 - C_{10}$ less the sum of BTEX concentrations (Ref. NEPM 2013, Schedule B1) F2 TRH $> C_{10} - C_{16}$ less the concentration of naphthalene (Ref. NEPM 2013, Schedule B1)

GIL Groundwater Investigation Level
GME Groundwater Monitoring Event
HIL Health-based Investigation Level
HSL Health-based Screening Level

km Kilometres

LNAPL Light, non-aqueous phase liquid (also referred to as PSH)

DNAPL Dense, non-aqueous phase liquid
EIL Ecological Investigation Level
ESL Ecological Screening Level

m Metres

m AHD Metres Australian Height Datum m BGL Metres Below Ground Level mg/m³ Milligrams per cubic metre

mg/L Milligrams per litre µg/L Micrograms per litre

mV Millivolts
MW Monitoring well

NATA National Association of Testing Authorities, Australia

NEPC National Environmental Protection Council

NSW New South Wales

OEH Office of Environment and Heritage, NSW (formerly DEC, DECC, DECCW)

PAHs Polycyclic Aromatic Hydrocarbons

pH Measure of the acidity or basicity of an aqueous solution PSH Phase-separated hydrocarbons (also referred to as LNAPL)

PQL Practical Quantitation Limit (limit of detection for respective laboratory instruments)

QA/QC Quality Assurance / Quality Control

RAP Remediation Action Plan

SRA Sample receipt advice (document confirming laboratory receipt of samples)

SWL Standing Water Level

TDS Total dissolved solids (a measure of water salinity)
TCLP Toxicity Characteristics Leaching Procedure

TPH Total Petroleum Hydrocarbons (superseded term equivalent to TRH)



TRH Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)

UCL Upper Confidence Limit of the mean

USEPA United States Environmental Protection Agency

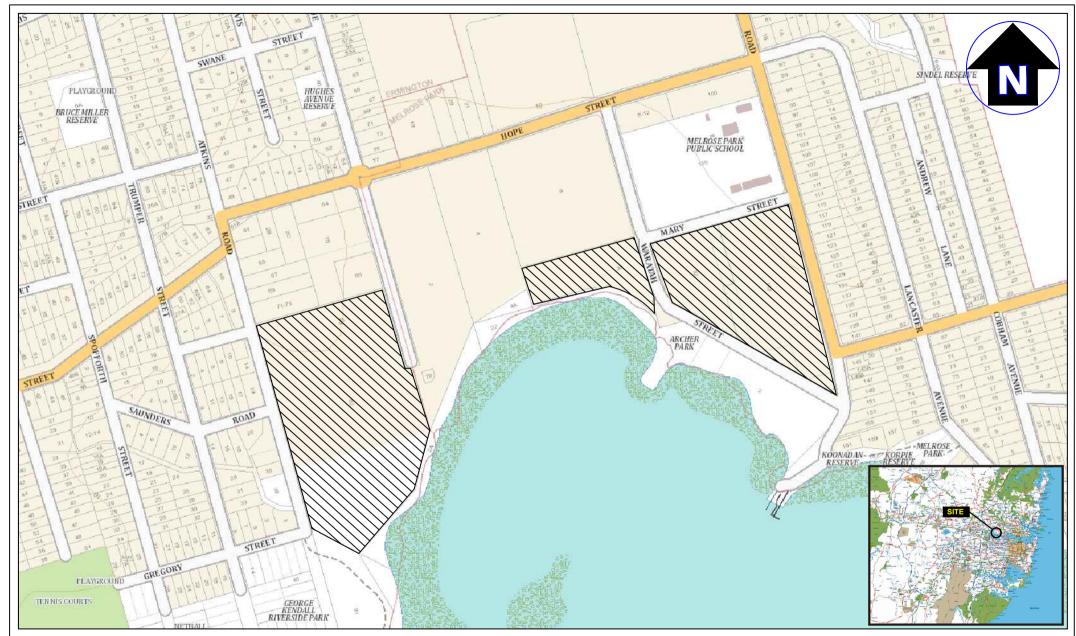
UPSS Underground Petroleum Storage System

UST Underground Storage Tank

VOCs Volatile Organic Compounds (specific organic compounds which are volatile)



Appendix A - Figures





Drawn:	T.M.
Approved:	-
Date:	-
Scale:	Not To Scale

Holdmark NSW Pty Ltd

Additional Geotechnical Investigation 82 Hughes Ave, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park, NSW Site Locality Plan Figure:

A.1



LEGEND (Note: All locations are approximate)

− − − Site bou
Borehole

Borehole/groundwater monitoring well location (EI, 2021) Groundwater monitoring well location (WSP, 2018)

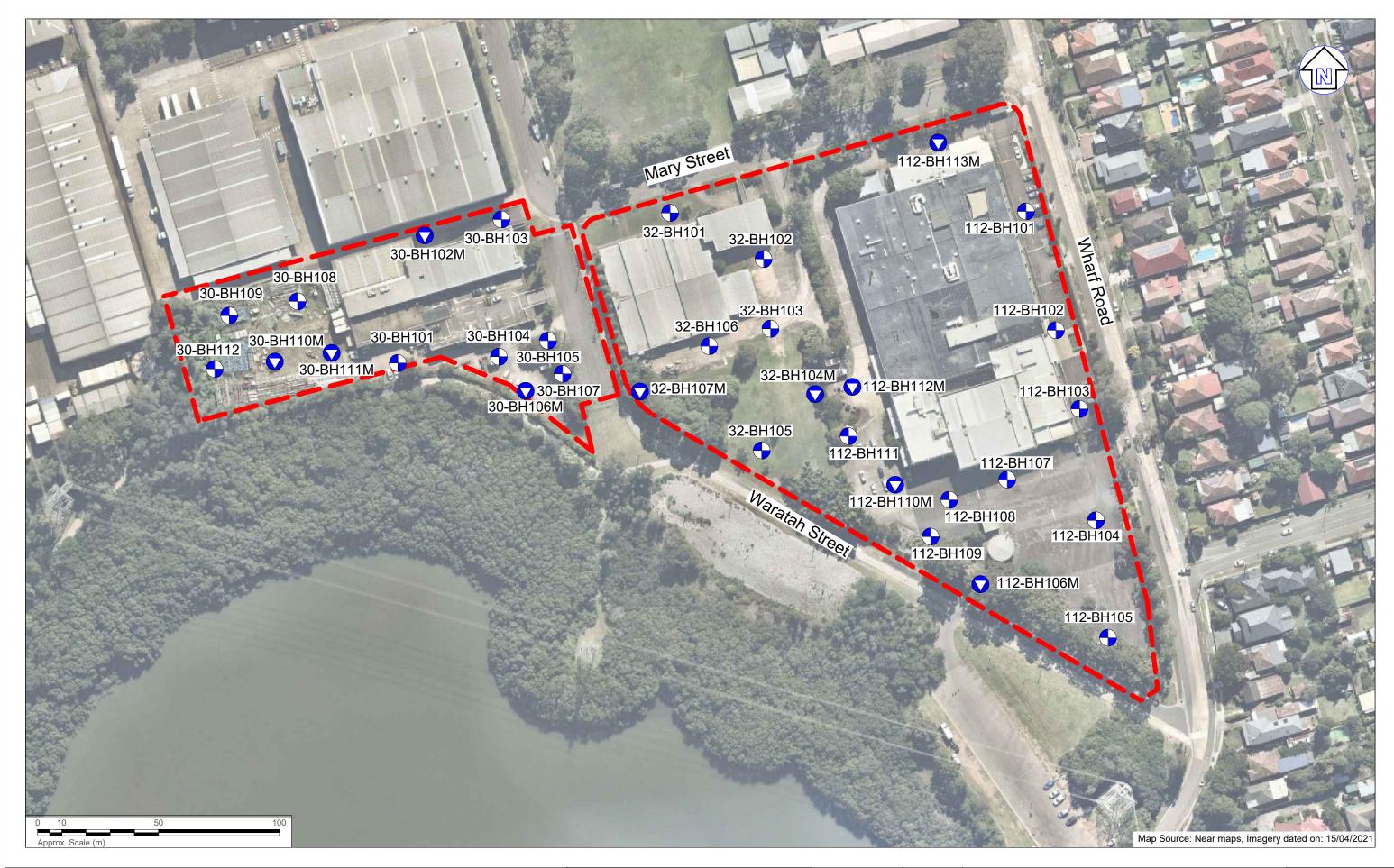


Drawn:	T.M.
Approved:	A.I.
Date:	11-05-21

Holdmark NSW Pty Ltd

Detailed Site Investigation 82 Hughes Ave Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park NSW Sampling Location Plan Figure:

A.2a



LEGEND (Note: All locations are approximate)

— — Site boundary

Borehole location

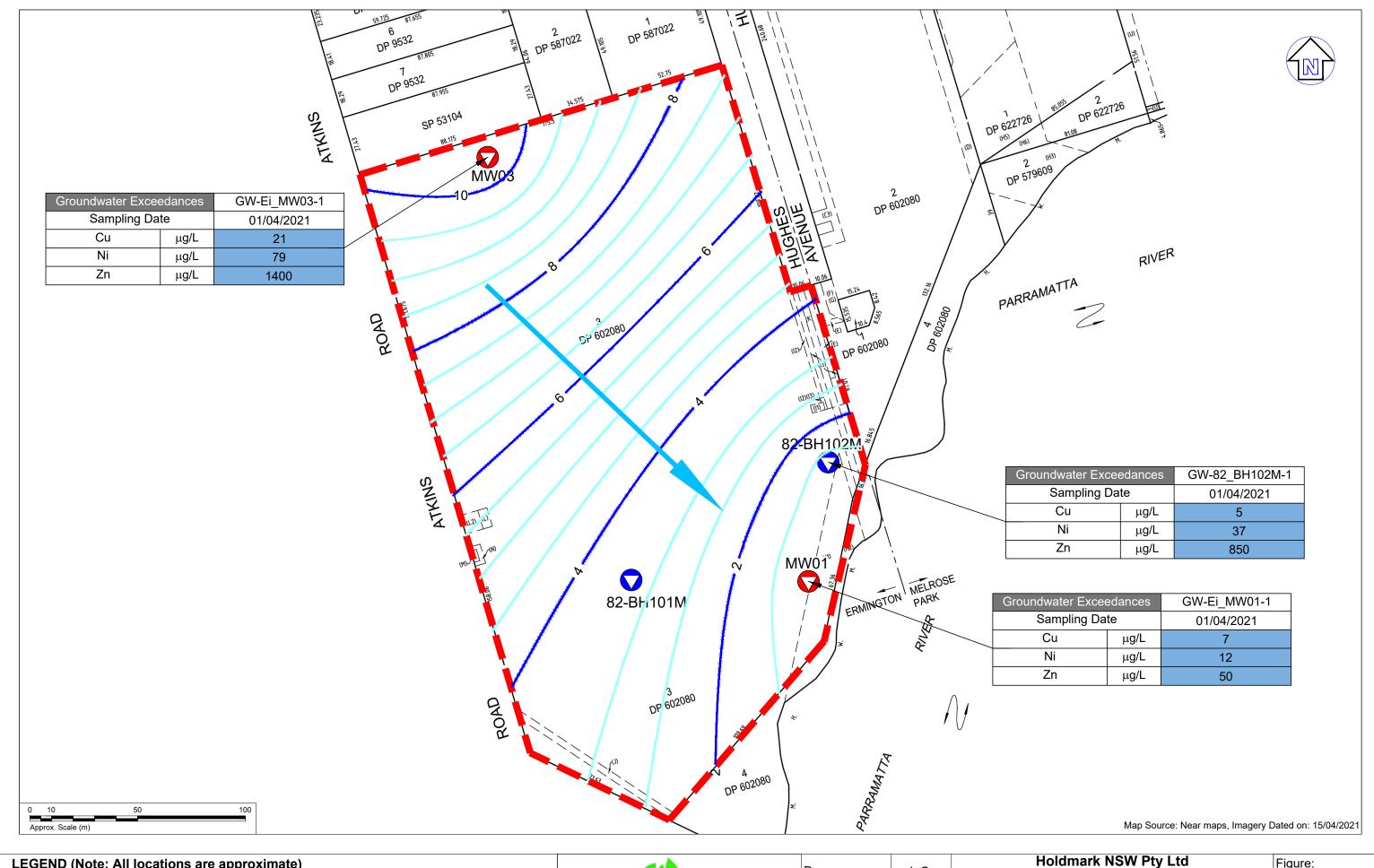
Borehole/groundwater monitoring well location



Drawn:	T.M.
Approved:	A.I.
Date:	11-05-21

Holdmark NSW Pty Ltd

Detailed Site Investigation 82 Hughes Ave Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park NSW Sampling Location Plan Figure:



LEGEND (Note: All locations are approximate)

Site boundary \bigcirc

Groundwater monitoring well location (EI, 2021)

Groundwater monitoring well location (WSP, 2018)

Highlighted indicates analyte concentration value exceeding the GIL for marine water quality

Groundwater contour Inferred groundwater flow

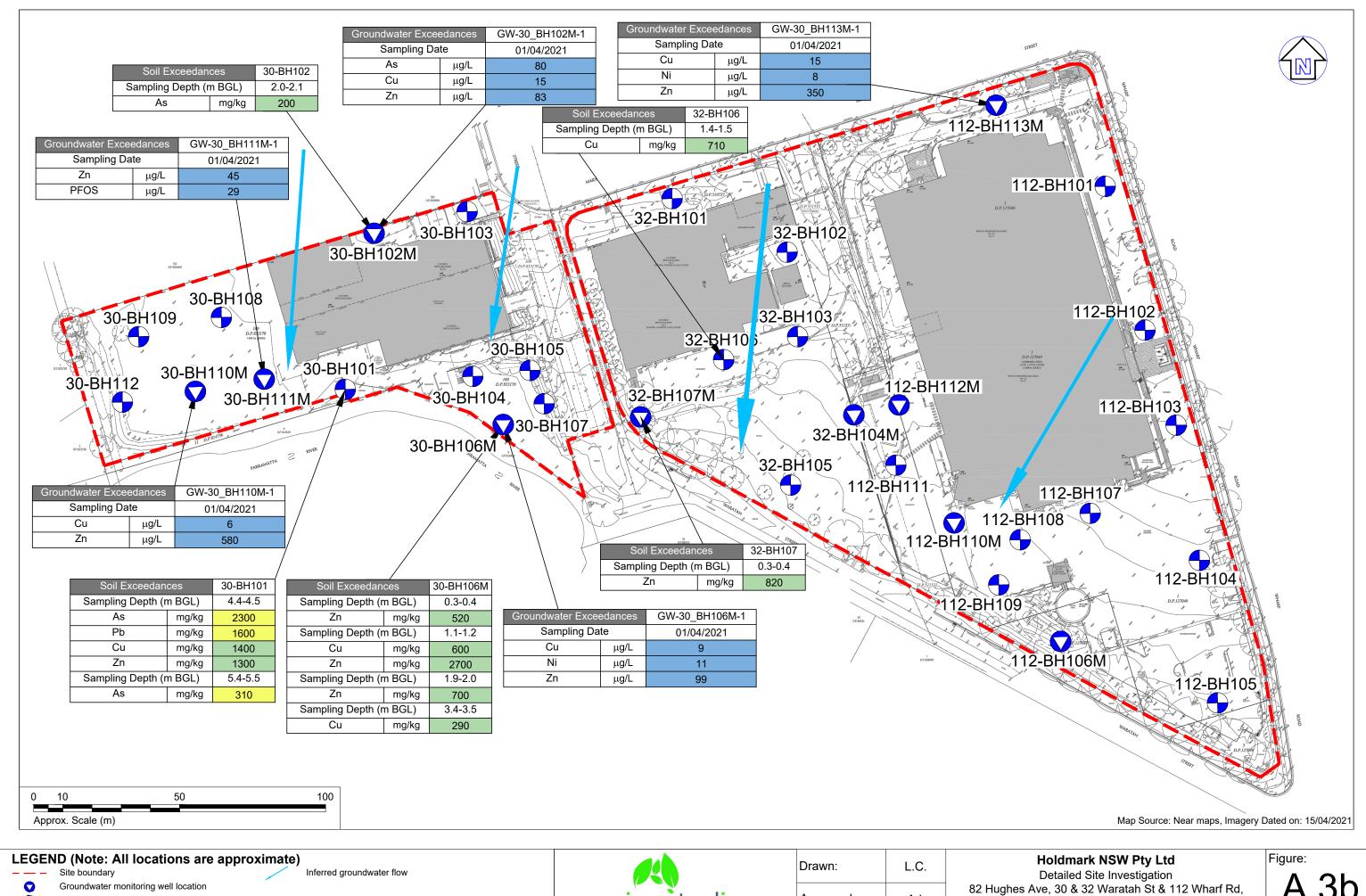


Drawn:	L.C.	
Approved:	A.I.	
Date:	28-05-21	

Detailed Site Investigation 82 Hughes Ave, 30 & 32 Waratah St & 112 Wharf Rd, Melrose Park NSW

Groundwater Exceedances Plan and Groundwater Flow Direction at 82 Hughes Ave

Figure:



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Highlighted indicates analyte concentration value exceeding the GIL for marine water quality

Highlighted yellow values indicates concentration exceeds human health criteria

Highlighted yellow values indicates concentration exceeds ecological criteria for Urban Residential and Public Open Space



Drawn:	L.C.	
Approved:	A.I.	
Date:	24-05-21	

Melrose Park NSW

Groundwater Exceedances Plan and Groundwater Flow Direction at 30 & 32 Waratah Street & 112 Wharf Rd

A.3b

Appendix B - Tables

Table 1: Soil Analytical Results E25077.E02 - Melrose Park

			Heavy Metals							PA	AHs			В	TEX			TR	Hs				To	PF	AS	>		
Sample ID	Depth of Sample (mBGL)	Sampling Date	As	Cd	Cr*	Cu	Pb	Hg	Ni	Zn	Carcinogeni c PAHs (as B(a)P TEQ)	Benzo(a)py ene	Naphthalen	Total PAHs	Benzene	Toluene	Ethylbenzer e	Total Xylenes	F1 less BTEX	F2 less Naphth.	F3	F4	осря	OPPs	otal PCBs	PFOS / PFHxS	PFOA	Asbestos
32 Hughes Avenue, Ermington I																												•
82-BH102M_0.4-0.6 30 Waratah Street, Melrose Park	0.4-0.6 k NSW	20/04/2021	5	<0.3	10	24	42	0.12	5.7	55	0.6	0.4	<0.1	5	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	NA
30-BH101_0.2-0.3	0.2-0.3	20/04/2021	4	<0.3	18	8.2	11	<0.05	12	20	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	<0.0016	<0.0008	No
30-BH101_0.5-0.6	0.5-0.6	20/04/2021	5	16	22	120	740	0.14	21	360	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	No
30-BH101_0.9-1.0 30-BH101_2.9-3.0	0.9-1.0 2.9-3.0	20/04/2021	9	0.5 NA	17 NA	6.4 NA	190 74	<0.05 NA	6.7 NA	99 NA	<0.3 NA	<0.1 NA	<0.1 NA	<0.8 NA	<0.1 NA	<0.1 NA	<0.1 NA	<0.3 NA	<25 NA	<25 NA	<90 NA	<120 NA	NA NA	NA NA	NA NA	NA NA	NA NA	No NA
30-BH101_4.4-4.5	4.4-4.5	20/04/2021	2300	17	95	1400	1600	0.11	32	1300	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	No
30-BH101_5.4-5.5 30-BH102M 0.2-0.3	5.4-5.5 0.2-0.3	20/04/2021	310 20	NA <0.3	NA 4.1	NA 18	550 66	NA <0.05	NA 1.5	NA 35	NA <0.3	NA <0.1	NA <0.1	NA <0.8	NA <0.1	NA <0.1	NA <0.1	NA <0.3	NA <25	NA <25	NA 150	NA <120	NA -1	NA <1.7	NA -1	NA <0.0016	NA <0.0008	NA No
30-BH102M_0.5-0.6	0.5-0.6	20/04/2021	14	<0.3	27	12	98	<0.05	4.8	54	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA.	NA NA	NA	NA NA	NA NA	No
30-BH102M_2.0-2.1	2.0-2.1	20/04/2021	200	1.9	7.4	130	490	0.1	3.5	140	0.3	0.1	<0.1	1.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	No
30-BH102M_4.0-4.1 30-BH103 0.3-0.4	4.0-4.1 0.3-0.4	20/04/2021	15 5	<0.3	9	52 5.7	110	<0.05	9.1	120 15	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	240 <90	<120 <120	NA <1	NA <1.7	NA <1	NA NA	NA NA	No No
30-BH103_0.9-1.0	0.9-1.0	20/04/2021	6	<0.3	11	16	120	< 0.05	3.4	83	0.3	0.2	<0.1	2.5	<0.1	<0.1	<0.1	<0.3	<25	<25	170	150	NA	NA	NA	NA	NA	No
30-BH104_0.4-0.5 30-BH104_2.0-2.1	0.4-0.5 2.0-2.1	20/04/2021	6	<0.3	7.6 15	18 12	75 110	<0.05	4.5 5.7	110 82	1.4	0.9	<0.1	7.7 0.9	<0.1	<0.1	<0.1	<0.3	<25 <25	<25	<90	<120	<1 NA	<1.7	<1 NA	<0.0016 NA	<0.0008	No No
30-BH104_2.7-2.5	2.5-2.7	20/04/2021	6	<0.3	10	19	280	0.06	7.4	140	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA NA	NA NA	NA NA	NA.	NA.	No
30-BH105_0.4-0.5	0.4-0.5	20/04/2021	6	<0.3	9.5	23	53	< 0.05	13	100	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	NA	NA	No
30-BH106M_0.3-0.4 30-BH106M_1.1-1.2	0.3-0.4	21/04/2021	10	1.3	79 130	72 600	140 530	<0.05	50 58	520 2700	0.5 <0.3	0.3 <0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 27	<90 190	<120 <120	<1 NA	<1.7 NA	<1 NA	<0.0016 NA	<0.0008 NA	No No
30-BH106M_1.9-2.0	1.9-2.0	21/04/2021	6	1.2	110	130	530	<0.05	38	700	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	No
30-BH106M_3.4-3.5 30-BH107_0.3-0.4	3.4-3.5	21/04/2021	10	0.7	160	290	200	<0.05	40	410	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA NA	NA NA	NA NA	NA NA	NA NA	No
30-BH107_0.3-0.4 30-BH107_0.9-1.0	0.3-0.4 0.9-1.0	21/04/2021 21/04/2021	12	0.9 <0.3	13	19	92 29	0.05 <0.05	8.5 28	820 63	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	NA NA	NA NA	NA NA	NA NA	NA NA	No No
30-BH107_2.3-2.4	2.3-2.4	21/04/2021	6	< 0.3	16	30	96	0.12	10	99	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	No
30-BH108_0.2-0.3 30-BH108_0.4-0.5	0.2-0.3 0.4-0.5	21/04/2021 21/04/2021	7	< 0.3	14 27	15 12	21	<0.05	5.9 1.4	28 14	< 0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120	<1 NA	<1.7 NA	<1 NA	NA NA	NA NA	No No
30-BH108_0.4-0.5 30-BH108_1.2-1.3	1.2-1.3	21/04/2021	5	<0.3	12	15	18 25	<0.05	6.6	180	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA NA	NA NA	NA NA	NA NA	NA NA	No No
30-BH108_2.7-2.8	2.7-2.8	21/04/2021	8	<0.3	17	12	140	0.13	4.6	110	0.3	0.2	<0.1	1.8	<0.1	<0.1	<0.1	<0.3	<25	<25	200	260	NA	NA	NA	NA	NA	No
30-BH109_0.3-0.4 30-BH110M_0.2-0.3	0.3-0.4 0.2-0.3	21/04/2021 21/04/2021	18	<0.3	7.7	24 5.9	38 10	<0.05	2.7 3.1	42 15	1.2 <0.3	0.8 <0.1	<0.1	7.9 <0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	NA NA	NA NA	NA NA	NA NA	NA NA	No No
30-BH110M_1.4-1.5	1.4-1.5	21/04/2021	5	<0.3	10	9.2	20	<0.05	1.7	14	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA.	NA.	NA	NA.	NA.	No
30-BH110M_2.2-2.3	2.2-2.3	21/04/2021	6	<0.3	13	9.2	24	< 0.05	5.5	28	0.5	0.3	<0.1	3.2	<0.1	<0.1	<0.1	<0.3	<25	<25	150	<120	NA	NA	NA	NA	NA	No
30-BH111M_0.2-0.3 30-BH117_0.2-0.3	0.2-0.3 0.2-0.3	21/04/2021 21/04/2021	7	<0.3	13	7.1	16 16	<0.05	6.8 3.6	30 23	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	NA NA	NA NA	NA NA	NA NA	NA NA	No No
32 Waratah Street, Melrose Park			1		1	1																						
112-BH101_0.3-0.4	0.3-0.4	22/04/2021	10	<0.3	12	37	16	< 0.05	26	29	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	No
112-BH102_0.4-0.5 112-BH103_0.2-0.3	0.4-0.5 0.2-0.3	22/04/2021 21/04/2021	6	<0.3	9.3	54 22	5 20	<0.05	68 8.4	41 28	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	<1 NA	<1.7 NA	<1 NA	<0.0016 NA	<0.0008 NA	No No
112-BH104_0.2-0.3	0.2-0.3	21/04/2021	2	<0.3	12	66	2	<0.05	68	40	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	NA.	NA.	No
112-BH105_0.2-0.3	0.2-0.3	21/04/2021	4	<0.3	15	18	43	< 0.05	10	260	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	<0.0016	<0.0008	No
112-BH106M_0.2-0.3 112-BH106M 1.4-1.5	0.2-0.3 1.4-1.5	21/04/2021	7	<0.3	11	26 23	28 57	<0.05	7 5.3	37 46	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	<1 NA	<1.7 NA	<1 NA	<0.0016 NA	<0.0008 NA	No No
112-BH107_0.2-0.3	0.2-0.3	21/04/2021	5	<0.3	7.8	39	14	< 0.05	23	33	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	NA	NA	No
112-BH108_0.2-0.3	0.2-0.3 0.7-0.8	21/04/2021 21/04/2021	6 5	<0.3	15	39	25 17	<0.05	19	61 68	0.8	0.5	<0.1	7.4 <0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25	210	300	NA NA	NA NA	NA NA	NA NA	NA NA	No No
112-BH108_0.7-0.8 112-BH109_0.3-0.4	0.7-0.8	21/04/2021	2	<0.3	5.9 8.8	27 3.6	5	<0.05	6.9 1.8	9.8	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA <1	NA <1.7	NA <1	0.039	0.0009	No No
112-BH109_0.7-0.8	0.7-0.8	21/04/2021	9	< 0.3	10	23	23	< 0.05	4	30	< 0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA	NA	No
112-BH110M_0.2-0.3 112-BH111_0.2-0.3	0.2-0.3 0.2-0.3	21/04/2021 22/04/2021	9	<0.3	16 12	19 26	32 20	<0.05	6.7 4.4	92 27	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	<1 NA	<1.7 NA	<1 NA	NA NA	NA NA	No No
112-BH111_0.6-0.7	0.6-0.7	22/04/2021	3	<0.3	6	15	16	<0.05	3	17	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA.	NA NA	NA.	NA	NA.	No
112-BH112M_0.4-0.5	0.4-0.5	22/04/2021	7	0.3	23	31	31	0.13	38	210	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	0.0098	<0.0008	No
112-BH113M_0.2-0.3 112 Wharf Road, Melrose Park N	0.2-0.3 NSW	22/04/2021	11	<0.3	12	16	27	0.09	4.8	38	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	0.0029	0.0073	No
32-BH101_0.1-0.2	0.1-0.2	22/04/2021	3	<0.3	6.8	6.5	54	0.13	2.7	36	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	<0.0016	<0.0008	No
32-BH102_0.2-0.3	0.2-0.3	22/04/2021	8	<0.3	13	23	19	< 0.05	5.3	16	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	NA	NA.	No
32-BH103_0.3-0.4 32-BH103_0.9-1.0	0.3-0.4 0.9-1.0	22/04/2021 22/04/2021	6 11	<0.3	11 18	20 23	18 30	<0.05	4.1 8	14 39	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	<1 NA	<1.7 NA	<1 NA	NA NA	NA NA	No No
32-BH103_0.9-1.0 32-BH104M_0.2-0.3	0.2-0.3	22/04/2021	3	<0.3	5.4	12	14	<0.05	1.7	11	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	<0.0016	<0.0008	No
32-BH105_0.2-0.3	0.2-0.3	22/04/2021	9	<0.3	27	42	220	0.18	20	150	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	NA NA	NA	No
32-BH106_0.2-0.3 32-BH106_1.4-1.5	0.2-0.3 1.4-1.5	22/04/2021 22/04/2021	10	<0.3	13 22	36 710	41 86	4.7 0.38	6.8 16	42 130	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25 <25	<25 <25	<90 <90	<120 <120	NA NA	NA NA	NA NA	NA NA	NA NA	No No
32-BH107M_0.2-0.3	0.2-0.3	22/04/2021	6	<0.3	11	8.8	17	<0.05	3.9	17	<0.3	<0.1	<0.1	<0.8	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	<0.0016	<0.0008	No
Adopted Criteria												B33333444	***************************************											1000000000		lana and a second		
NEPM (2013) Health	Residential with Minimal Soi	I Access Land Use (HIL-B)	500	150	500 Cr(V1)	30,000	1,200	120	1,200	60,000	4			400									10		1			
Investigation Levels (HILs)	Public Open S	Space (HIL-C)	300	90	300	17,000	600	80	1,200	30,000	3			300														
1	HSL A & B - low - high density	(0 m to <1 m BGL)											5		0.7	480	NL	110	50	280								
	residential Soil texture classification	(1 m to <2 m BGL) (2 m to <4 m BGL)											NL NL		2	NL NL	NL NL	310 NL	90 150	NL NL								
	-CLAY 1	(4 m + BGL)											NL NL		3	NL NL	NL NL	NL NL	290	NL NL								
	HSL C - Recreational / Open	(0 m to <1 m BGL)											NL		NL	NL	NL	NL	NL	NL								
NEPM (2013) Health Screening Levels (HSLs)	Space Soil texture classification	(1 m to <2 m BGL) (2 m to <4 m BGL)											NL NL		NL NL	NL NL	NL NL	NL NL	NL NL	NL NL								
Ĺ	-CLAY 1	(4 m + BGL)											NL		NL	NL	NL	NL	NL	NL								
	Asbestos Recreational (HSL-C)	Bonded (%w/w) FA and AF (%w/w)																										0.02
F	Asbestos	Bonded (%w/w)																										0.001
	Residential (HSL-B)	FA and AF (%w/w)																										0.001
NEPM (2013) Ecological Criteria ²	Urban Residential and Pr	ublic Open Space (B&C)	100		338 b	168	1,240		41	419		33 °	170		50	85	70	105	180	120	300 ¹	2,800	180 ^d					
NEPM (2013)	Fine grained ¹	Public Open Space (C)		•				V											700	1,000	3,500	10,000						
Management Limits	soil texture	Residential (B)																			0,300	2000000						
NEMP (2020)	Human Health based guidance spa	varues for HIL C - Public open ce																								1	10	
			Manual Control										**********				******							* delicated	delegatede			
	Human Health based guidance with minimal	values for HIL B - Residential																								2	20	

riganganes yearow values indicases concentration exceeds numan heatin crietia.

Residential (8)

NEPM 2013 °C - Nublic open space such as parks, playgrounds, playing fields, secondary schools and footpaths.

Results are reported as total Chromium concentrations

NL

Not Limiting'

ND

Not detected i.e. all concentrations of the compounds within the analyte group were found to be below the liaboratory limits of detection.

NA

Not Analysed i.e. the sample was not analysed.

THR C-Q-IL less the sum concentration of BTEX

F2

TRH C_{-ut}-C_{1u} less the unconcentration of BTEX

F3

TRH C_{-ut}-C_{1u} less the unconcentration of Maphthalene.

F3

TRH C_{-ut}-C_{1u}

F1

FIRe grained soil values were applied as the most conservative material type.

Site specific ELLE/SLE/SLE were derived using the methodology prescribed by NEPM (2013). See Table 1A for details.

Values are for Cr (II)

Values are for Cr (II)

Value shown is for Chlorpyrifos



Table B2 – Summary of Groundwater Investigation Results Melrose Park NSW

Table B2 – Summary	y or Groundwat	ei ilivestiya	ation Resul	IS MEILOSE																								
					Heavy	Metals						BTEX			VC	OCs .		TI	RHs			PAHs			PF.	AS		
Sample Identification	GME date	As	Cd	Cr	Cu	Pb	Ni	Zn	Hg	Benzene	Toluene	Ethylbenzene	o-xylene	m/p-xylene	cis-1,2-dichloroethene	Total VOCs	F1*	F2**	F3(>C ₁₆ -C ₃)	F4 (>C ₃₁ -C ₄₀)	Total PAHs	Berizo(a)pyrene	Naphthalene	PFHxS	PFOS	PFHxS + PFOS	PFOA	1,4 Dioxane
82 Hughes Avenue,	Hughes Avenue, Ermington NSW																											
GW-82_BH102M-1		<1	0.3	1	5	<1	37	850	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	<10	<50	<60	<500	<500	<1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
GW-EI_MW01-1	30/4/2021	4	< 0.1	<1	7	<1	12	50	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	<10	<50	<60	<500	<500	<1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
GW-EI_MW03-1		2	1.1	1	21	2	79	1400	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	<10	<50	<60	<500	<500	<1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
30 Waratah Street, I	Melrose Park N	SW																										
GW-30_BH102M-1		80	< 0.1	<1	15	<1	7	83	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	11	22	<50	<60	<500	<500	<1	< 0.1	< 0.1	0.07	0.13	0.2	< 0.01	< 0.01
GW-30_BH106M-1	30/4/2021	7	< 0.1	<1	9	<1	11	99	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	<10	<50	<60	<500	<500	<1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
GW-30_BH110M-1	30/4/2021	1	< 0.1	2	6	<1	6	580	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	<10	<50	<60	<500	<500	<1	< 0.1	< 0.1	0.02	0.02	0.04	0.03	< 0.01
GW-30_BH111M-1		9	< 0.1	<1	1	4	2	45	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	<10	<50	<60	<500	<500	<1	< 0.1	< 0.1	28	29	57	1.7	< 0.01
32 Waratah Street, I	Melrose Park N	SW																										
GW-112_BH113M-1	30/4/2021	<1	0.1	<1	15	<1	8	350	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	<1	< 0.5	<10	<50	<60	<500	<500	<1	< 0.1	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
112 Wharf Road, Me	elrose Park NS	W																										
GW-32-BH104M-1	30/4/2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.09	0.02	0.11	< 0.01	NA
GIL ⁴ (Marine))	NR	0.7 3	27(Cr III) 1	1.3	4.4	7	15 ²	0.1 3	500 ²	NR	NR	NR	NR									50 ²					
GIL4 ⁶ (Fresh Wal	ter)	24 (Asili) 13 (AsV)	0.2	NR (Cr III)	1.4	3.4	11	8 ²	0.06 ³	950	NR	NR	350	200									16		0.13 8		220 ⁸	
HSL ⁵										5,000	NL	NL	NL	NL		_	6,000	NL					NL					
Drinking Wat	ter ^{7,8}	100	20	NR	20,000	100	200	NR	10	10	8,000	3,000	6,	000	600				, The second second		NR	0.1	NR					

Notes:

All values are $\mu g/L$ unless stated otherwise.

NA Not analysed

NR No current published criterion.

ND 'Not detected' i.e. all concentrations of the compounds within the analyte group were found to be below the laboratory limits of detection.

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

** To obtain F2 subtract Naphthalene from the >C10-C16 fraction.

Values have been calculated using a calculated mean hardness of 30 mg/L CaCO3 refer to ANZECC & ARMCANZ (2000) for further guidance on recalculating for site-specific hardness.

Figure may not protect key species from chronic toxicity, refer to ANZECC & ARMCANZ (2000) for further guidance.

Chemical for which possible bloaccumulation and secondary poisoning effects should be considered, refer to ANZECC & ARMCANZ (2000) for further guidance.

4 NEPM (2013) Groundwater Investigation Levels for marine water quality, based on ANZECC & ARMCANZ (2000).

NEPC (2013) Table 1A(4) Groundwater HSL D for vapour intrusion at the contaminant source depth ranges in sand 2m to <4m.

6 NEPM (2013) Groundwater Investigation Levels for fresh water quality, based on ANZECC & ARMCANZ (2000), level of species protection is 90% due to being located in an urbanized area.

7 NEPM (2013) Groundwater Investigation Levels for drinking water quality, based on Australian Drinking Water Guidelines (NHMRC 2011).

8 Drinking Water value has been used multiplied by a factor of 10 to address the secondary contact recreation.

NEPC (2013) Table 1A(4) Groundwater HSL D for vapour intrusion at the contaminant source depth ranges in clay 2m to <4m.

Highlighted indicates analyte concentration value exceeding the Groundwater Investigation Levels for marine water quality
Highlighted indicates analyte concentration value exceeding the Groundwater Investigation Levels for drinking water quality



Table B3 – Summary of sPOCAS labaratory analytical results

		30 Wara	82 Hughes Avenue	AS		
Analysis	30-BH101_6.9-7.0	30-BH106M_6.3-6.4	30-BH110M_7.0-7.1	30-BH111M_6.9-7.0	82-BH102M_5.4-5.5	ASSMAC (1998) Criteria³
pH f ¹	7.8	7.9	7.1	7.3	6.8	<4.0
pH fox ²	6.3	6.5	5.1	6.7	4.9	<3.5
Titratable Actual Acidity (mol H ⁺ /tonne) -TAA	<5	<5	<5	N.A.	<5	NR
Total Potential Acidity (mol H ⁺ /tonne) -TPA	<5	<5	<5	N.A.	<5	18
Total Sulfidic Acidity (mol H ⁺ /tonne) -TSA	<5	<5	<5	N.A.	<5	18
KCI extractable sulfur (% w/w) - S _{KCI}	0.096	0.033	0.051	N.A.	0.013	NR
Peroxide sulfur (% w/w) - S _P	0.260	0.057	0.180	N.A.	0.016	NR
Peroxide oxidisable sulfur (% w/w) - S _{POS}	0.160	0.024	0.120	N.A.	< 0.005	0.03

Notes:

N.R. = no current criterion

N.A. = Not Analysed

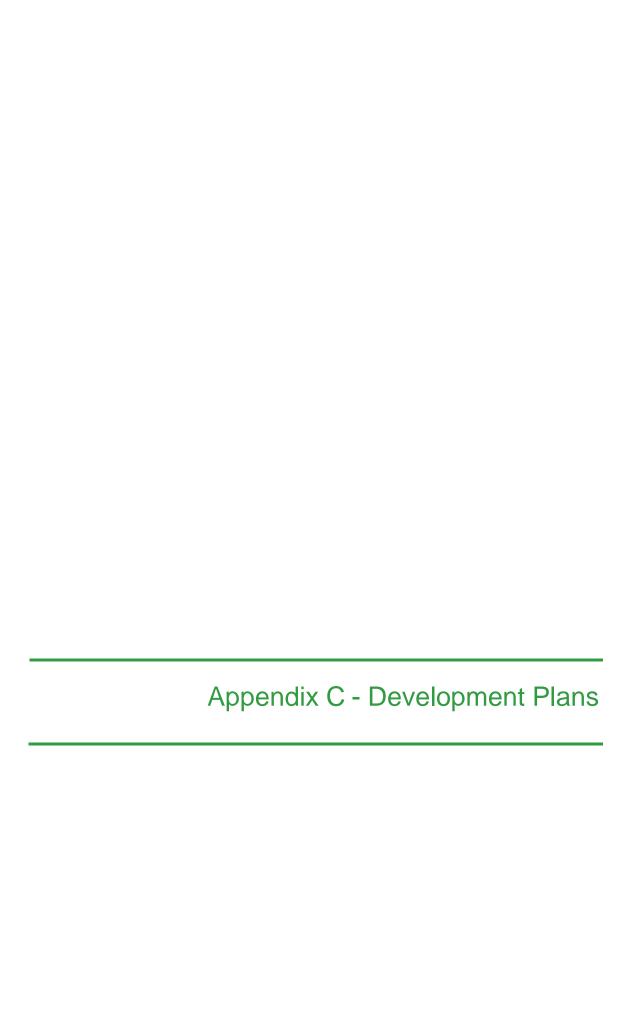
Indicates concentration exceeds adopted criteria.

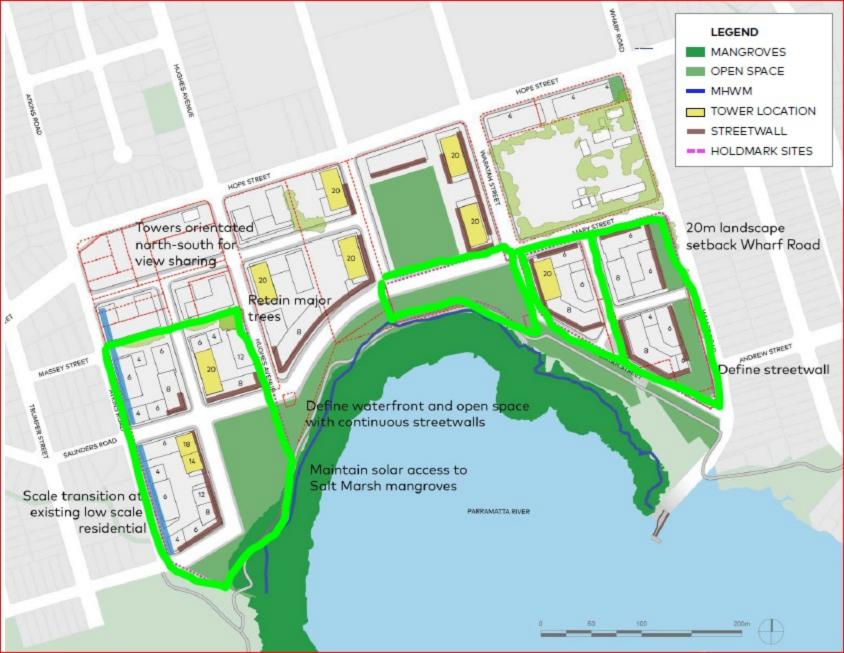


¹for Actual Acid Sulfate Soil

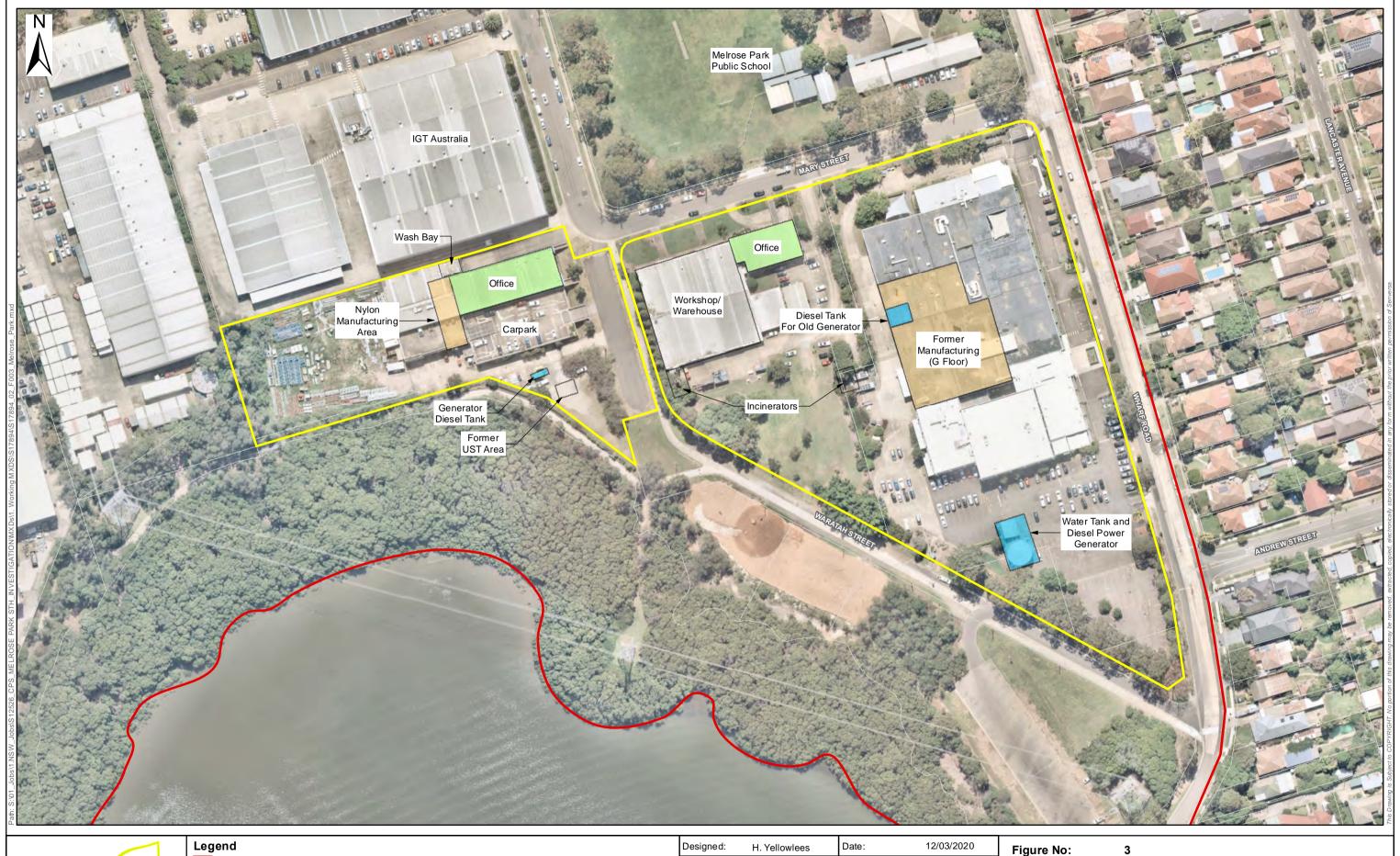
²Indicative value only, for Potential Acid Sulfate Soil

³Action Criteria that trigger need to prepare an ASS management plan, derived from Table 4.4, Section 2, ASSs Assessment Guidelines (ASSMAC, 1998);





Appendix D - Identified Sources by Previous Assessments





Level 14, 309 Kent Street, Sydney NSW 2000 (02) 9994 8016 (03) 9606 0074 www.senversa.com.au Phone: Fax: Website:

Legend

Melrose Park Southern Precinct Investigation Locations Lot Boundary

	Designed	l:	Н.	Yellow	lees	Date:		12/03/2020
	Drawn:		М	Sari		Revision:		0
	Checked:		М	Beasle	эy	Scale:		1:1,500 (A3)
	File:		S	17894_0	02_F003_N	Melrose_Pa	rk	
		0	10	20	40	60	80	100 Metres
Notes: Aerial imagery (28/02/2020) sourced from Nearmap Pty Ltd				Coordin	ate System:	GDA 1994 MG	A Zone 56	6

Figure No:

Title: Site Inspection - 30 and 32 Waratah St and 112 Wharf Rd, Melrose Park

Project: Preliminary Site Investigation

Melrose Park Southern Precinct Location:

Client: Holdmark Property Group c/o Cox Architecture





Level 14, 309 Kent Street, Sydney NSW 2000 (02) 9994 8016 (03) 9606 0074 www.senversa.com.au Phone: Fax: Website:

Legend

Melrose Park Southern Precinct Investigation Locations Lot Boundary

	Designed:	H.	Yellowl	ees	Date:	1:	2/03/2020
	Drawn:	М	. Sari		Revision:	0	
	Checked:	М	. Beasle	у	Scale:	1	:1,500 (A3)
	File:	S	17894_0	2_F004_E	Ermington		
	0	10	20	40	60	80	100
Notes: Aerial imagery (28/02/2020) sourced from Nearmap Pty Ltd	L		Coordina	ate System:	GDA 1994 MG <i>A</i>	X Zone 56	Metres

Figure No: Title: Site Inspection – 82 Hughes Ave, Ermington

Project: Preliminary Site Investigation Melrose Park Southern Precinct Location: Client: Holdmark Property Group c/o Cox Architecture



Scale ratio correct when printed at A4

Figure 4
Asbestos Impact Plan

Appendix E – POEO Search

Licence - 1024



<u>Licence Details</u>		
Number:	1024	
Anniversary Date:	28-February	

Licensee GLAXOSMITHKLINE CONSUMER HEALTHCARE AUSTRALIA PTY LTD LOCKED BAG 3 ERMINGTON NSW 2115

Premises
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON NSW 2115
ERMINGTON NSW 2115

Scheduled Activity Chemical Production

Fee Based Activity	<u>Scale</u>
Chemical production waste generation	> 100 T generated or stored
Pharmaceutical and veterinary products production	> 2000-5000 T produced

Region
Waste & Resources - Waste Management
59-61 Goulburn Street
SYDNEY NSW 2000
Phone: (02) 9995 5000
Fax: (02) 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232





INF	ORMATION ABOUT THIS LICENCE	2
Dic	etionary	4
Re	sponsibilities of licensee	4
Va	riation of licence conditions	4
Du	ration of licence	4
Lic	ence review	2
Fee	es and annual return to be sent to the EPA	2
Tra	ansfer of licence	Ę
Pul	blic register and access to monitoring data	Ę
1	ADMINISTRATIVE CONDITIONS	6
A1	What the licence authorises and regulates	6
A2	Premises or plant to which this licence applies	E
А3	Information supplied to the EPA	6
2	DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1	Location of monitoring/discharge points and areas	7
3	LIMIT CONDITIONS	7
L1	Pollution of waters	7
L2	Waste	7
4	OPERATING CONDITIONS	7
01	Activities must be carried out in a competent manner	7
02	Maintenance of plant and equipment	٤
О3	Emergency response	٤
04	Processes and management	٤
O5	Waste management	8
5	MONITORING AND RECORDING CONDITIONS	S
M1	Monitoring records	ć
M2	Recording of pollution complaints 1	(
МЗ	Telephone complaints line 1	(
6	REPORTING CONDITIONS1	(
R1	Annual return documents 1	(
R2	Notification of environmental harm 1	•
R3	Written report 1	1
7	GENERAL CONDITIONS1	2
G1	Copy of licence kept at the premises or plant1	,



Licence - 1024

DICTIONARY		13
General Diction	ary	13

Licence - 1024



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Licence - 1024



The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

GLAXOSMITHKLINE CONSUMER HEALTHCARE AUSTRALIA PTY LTD		
LOCKED BAG 3		
ERMINGTON NSW 2115		

subject to the conditions which follow.

Licence - 1024



1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical Production	Chemical production waste generation	> 100 T generated or stored
Chemical Production	Pharmaceutical and veterinary products production	> 2000 - 5000 T produced

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details	
GLAXOSMITHKLINE	
82 HUGHES AVENUE	
ERMINGTON	
NSW 2115	
LOT 3 DP 602080	

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

Licence - 1024



P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

L2.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005	As specified in each particular resource recovery exemption	NA
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

Licence - 1024



- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident

O4 Processes and management

- O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the DECC Waste Classification Guidelines as in force from time to time.
- O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Waste management

- O5.1 The licensee must ensure that the handling, labelling, containment, storage and disposal of clinical and sharps wastes are carried out in accordance with the "Waste Management Guidelines for Health Care Facilities", 1998, issued by the NSW Department of Health.
- O5.2 Without limiting to O5.1, the licensee must ensure that:
 - (a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment;
 - (b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage;
 - (c) no radioactive substance as defined by the Radiation Control Act, 1990 is mixe or stored with any of the clinical wastes;

Environment Protection Authority - NSW Licence version date: 15-Dec-2015

Licence - 1024



- (d) bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times;
- (e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording 'Clinical Wastes' along with the biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health;
- (f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected before being reuses; and
- (g) where second hand containers are used, all other irrelevant markings shall be obliterated.
- O5.3 In addition to O5.1, the licensee must ensure that;
 - (a) sharps are segregated by the use of enclosed rigid ompenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in waste bags labelled 'Clinical Wastes' along with the appropriate biohazard symbol;
 - (b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled 'Cytotoxic Wastes' along with the appropriate biohazard symbol; and
 - (c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids andthat comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

Licence - 1024



M2 Recording of pollution complaints

- M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M2.2 The record must include details of the following:
 - a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

- M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
 - a) a Statement of Compliance; and
 - b) a Monitoring and Complaints Summary.
 - At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.
- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.
- Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.
- R1.3 Where this licence is transferred from the licensee to a new licensee:

Licence - 1024



- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
 - a) in relation to the surrender of a licence the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence the date from which notice revoking the licence operates.
- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
 - a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.
- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
 - a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
 - and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

Licence - 1024



- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
 - a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Authority - NSW Licence version date: 15-Dec-2015

Licence - 1024



Dictionary

General Dictionary

3DGM [in relation		
to a concentration		
limit1		

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act Means the Protection of the Environment Operations Act 1997

activityMeans a scheduled or non-scheduled activity within the meaning of the Protection of the Environment

Operations Act 1997

actual load Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

AM Together with a number, means an ambient air monitoring method of that number prescribed by the

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

AMG Australian Map Grid

anniversary date The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a

licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the

commencement of the Act.

annual return Is defined in R1.1

Approved Methods Publication

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

assessable pollutants

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

BOD Means biochemical oxygen demand

CEM Together with a number, means a continuous emission monitoring method of that number prescribed by

the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

COD Means chemical oxygen demand

composite sample Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples

collected at hourly intervals and each having an equivalent volume.

cond. Means conductivity

environment Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation Has the same meaning as in the Protection of the Environment Administration Act 1991

EPA Means Environment Protection Authority of New South Wales.

fee-based activity classification

Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations

(General) Regulation 2009.

general solid waste (non-putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Licence - 1024



flow weighted composite sample

Means a sample whose composites are sized in proportion to the flow at each composites time of collection

general solid waste (putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act

199

grab sample Means a single sample taken at a point at a single time

hazardous waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

licensee Means the licence holder described at the front of this licence

load calculation protocol

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

local authority Has the same meaning as in the Protection of the Environment Operations Act 1997

material harm Has the same meaning as in section 147 Protection of the Environment Operations Act 1997

MBAS Means methylene blue active substances

Minister Means the Minister administering the Protection of the Environment Operations Act 1997

mobile plant Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

motor vehicle Has the same meaning as in the Protection of the Environment Operations Act 1997

O&G Means oil and grease

percentile [in relation to a concentration limit of a sample] Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

plant Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as

motor vehicles.

pollution of waters [or water pollution]

Has the same meaning as in the Protection of the Environment Operations Act 1997

premises Means the premises described in condition A2.1

public authority Has the same meaning as in the Protection of the Environment Operations Act 1997

regional office Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence

For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary

of the date of issue or last renewal of the licence following the commencement of the Act.

restricted solid waste

TM

reporting period

ste 199

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

scheduled activity Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997

special waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

Together with a number, means a test method of that number prescribed by the Approved Methods for the

Sampling and Analysis of Air Pollutants in New South Wales.

Licence - 1024



Means total suspended particles TSP

Means total suspended solids TSS

Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or Type 1 substance

more of those elements

Type 2 substance Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any

compound containing one or more of those elements

Means any area shown as a utilisation area on a map submitted with the application for this licence utilisation area

waste Has the same meaning as in the Protection of the Environment Operations Act 1997

waste type Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-

putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 19-June-2000

Licence - 1024



End Notes

- 1 Licence transferred through application 141325, approved on 16-Jul-2002, which came into effect on 01-Jul-2002.
- 2 Licence varied by notice 1021300, issued on 05-Nov-2002, which came into effect on 05-Nov-2002.
- 3 Licence varied by Admin corrections to archived record, issued on 02-Dec-2002, which came into effect on 02-Dec-2002.
- 4 Licence varied by notice 1072214, issued on 17-Oct-2007, which came into effect on 17-Oct-2007.
- 5 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 6 Licence varied by notice 1104803, issued on 12-Nov-2009, which came into effect on 12-Nov-2009.
- 7 Licence varied by correction to DECCW Region data record, issued on 13-Jul-2010, which came into effect on 13-Jul-2010.
- 8 Licence varied by correction to scheduled activity name, issued on 22-Dec-2010, which came into effect on 22-Dec-2010.
- 9 Licence varied by notice 1529464 issued on 01-Jun-2015
- 10 Licence transferred through application 1533537 approved on 02-Sep-2015, which came into effect on 01-Sep-2015
- 11 Licence varied by notice 1534833 issued on 15-Dec-2015

Licence - 1024



GLAXOSMITHKLINE AUSTRALIA PTY LTD ABN 47 100 162 481 LOCKED BAG 3 ERMINGTON NSW 2115

Attention: Anthony Murray

Notice Number 1529464
File Number EF13/2984
Date 01-Jun-2015

NOTICE OF VARIATION OF LICENCE NO. 1024

BACKGROUND

- A. GLAXOSMITHKLINE AUSTRALIA PTY LTD ("the licensee") is the holder of Environment Protection Licence No. 1024 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at 82 HUGHES AVENUE, ERMINGTON, NSW, 2115 ("the premises").
- B. Due to an upgrade in the Environment Protection Authority's (EPA) licensing system, minor format changes have occurred to the Licence.
- C. A draft of this licence variation was sent to the licensee for review and comment on Tuesday 19 May 2015.
- D. The licensee replied by email on Sunday 24 May 2015 that there were no comments.
- E. Therefore the EPA has issued this licence variation.

F. VARIATION OF LICENCE NO. 1024

- 1. By this notice the EPA varies licence No. 1024. The attached licence document contains all variations that are made to the licence by this notice.
- 2. The following variations have been made to the licence:
- Licence conditions in the current Licence that are not relevant to the Premises or that have previously
 contained "not applicable" have been removed from this variation. As a result, condition numbering has
 changed throughout the Licence. All conditions that are in the current Licence are included in this
 variation notice unless detailed below.
- Licence condition A4 Information supplied to the EPA is now referred to as A3 Information supplied to the EPA in the Licence.



- Licence condition L5 Waste is now referred to as L2 Waste in the Licence.
- Licence Condition L5.1 is now referred to as L2.1.
- L2.1 has been varied to include a waste table. The waste table lists the wastes that are permitted to be received at the Premises with this Licence and includes a description of the waste, the activity that waste may be used for at the Premises and any other limits.
- Licence condition M4 Recording of pollution complaints is now referred to as M2 Recording of pollution complaints in the Licence.
- Licence condition **O3.1** changed to require a **Pollution Incident Response Management Plan** (PIRMP).
- Licence condition R1.9 has been deleted as it is no longer relevant.

Jacqueline Ingham
Unit Head
Waste & Resources - Waste Management
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (http://www.epa.nsw.gov.au/prpoeo/index.htm) in accordance with section 308 of the Act.

Appeals against this decision

• You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.



When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Licence - 1024



<u>Licence Details</u>		
Number:	1024	
Anniversary Date:	28-February	

Licensee GLAXOSMITHKLINE AUSTRALIA PTY LTD LOCKED BAG 3 ERMINGTON NSW 2115

Premises
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON NSW 2115

Scheduled Activity	
Chemical Production	

Fee Based Activity	<u>Scale</u>
Chemical production waste generation	> 5-100 T generated or stored
Pharmaceutical and veterinary products production	0-2000 T produced

Region
Waste & Resources - Waste Management
59-61 Goulburn Street
SYDNEY NSW 2000
Phone: (02) 9995 5000
Fax: (02) 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232





INF	ORMATION ABOUT THIS LICENCE	2
Dic	etionary	4
Re	sponsibilities of licensee	4
Va	riation of licence conditions	4
Du	ration of licence	4
Lic	ence review	2
Fee	es and annual return to be sent to the EPA	2
Tra	ansfer of licence	Ę
Pul	blic register and access to monitoring data	Ę
1	ADMINISTRATIVE CONDITIONS	6
A1	What the licence authorises and regulates	6
A2	Premises or plant to which this licence applies	6
А3	Information supplied to the EPA	6
2	DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1	Location of monitoring/discharge points and areas	7
3	LIMIT CONDITIONS	7
L1	Pollution of waters	7
L2	Waste	7
4	OPERATING CONDITIONS	7
01	Activities must be carried out in a competent manner	7
02	Maintenance of plant and equipment	8
О3	Emergency response	٤
04	Processes and management	8
O5	Waste management	8
5	MONITORING AND RECORDING CONDITIONS	ξ
M1	Monitoring records	ç
M2	Recording of pollution complaints 1	(
МЗ	Telephone complaints line	(
6	REPORTING CONDITIONS1	(
R1	Annual return documents 1	(
R2	Notification of environmental harm 1	•
R3	Written report 1	
7	GENERAL CONDITIONS	2
G1	Copy of licence kept at the premises or plant1	,



Licence - 1024

DICTIONARY		13
General Diction	ary	13

Licence - 1024



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Licence - 1024



The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

GLAXOSMITHKLINE AUSTRALIA PTY LTD
LOCKED BAG 3
ERMINGTON NSW 2115

subject to the conditions which follow.

Licence - 1024



1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical Production	Chemical production waste generation	> 5 - 100 T generated or stored
Chemical Production	Pharmaceutical and veterinary products production	0 - 2000 T produced

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON
NSW 2115
LOT 3 DP 602080

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

Licence - 1024



P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

L2.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005	As specified in each particular resource recovery exemption	NA
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

Licence - 1024



- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident

O4 Processes and management

- O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the DECC Waste Classification Guidelines as in force from time to time.
- O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Waste management

- O5.1 The licensee must ensure that the handling, labelling, containment, storage and disposal of clinical and sharps wastes are carried out in accordance with the "Waste Management Guidelines for Health Care Facilities", 1998, issued by the NSW Department of Health.
- O5.2 Without limiting to O5.1, the licensee must ensure that:
 - (a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment;
 - (b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage;
 - (c) no radioactive substance as defined by the Radiation Control Act, 1990 is mixe or stored with any of the clinical wastes;

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



- (d) bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times;
- (e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording 'Clinical Wastes' along with the biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health;
- (f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected before being reuses; and
- (g) where second hand containers are used, all other irrelevant markings shall be obliterated.
- O5.3 In addition to O5.1, the licensee must ensure that;
 - (a) sharps are segregated by the use of enclosed rigid ompenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in waste bags labelled 'Clinical Wastes' along with the appropriate biohazard symbol;
 - (b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled 'Cytotoxic Wastes' along with the appropriate biohazard symbol; and
 - (c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids andthat comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

Licence - 1024



M2 Recording of pollution complaints

- M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M2.2 The record must include details of the following:
 - a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

- M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
 - a) a Statement of Compliance; and
 - b) a Monitoring and Complaints Summary.
 - At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.
- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.
- Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.
- R1.3 Where this licence is transferred from the licensee to a new licensee:

Licence - 1024



- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
 - a) in relation to the surrender of a licence the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence the date from which notice revoking the licence operates.
- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
 - a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.
- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
 - a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
 - and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

Licence - 1024



- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
 - a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



Dictionary

General Dictionary

3DGM [in relation
to a concentration
limit1

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act Means the Protection of the Environment Operations Act 1997

activityMeans a scheduled or non-scheduled activity within the meaning of the Protection of the Environment

Operations Act 1997

actual load Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

AM Together with a number, means an ambient air monitoring method of that number prescribed by the

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

AMG Australian Map Grid

anniversary date The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a

licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the

commencement of the Act.

annual return Is defined in R1.1

Approved Methods Publication

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

assessable pollutants

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

BOD Means biochemical oxygen demand

CEM Together with a number, means a continuous emission monitoring method of that number prescribed by

the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

COD Means chemical oxygen demand

composite sample Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples

collected at hourly intervals and each having an equivalent volume.

cond. Means conductivity

environment Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation

Has the same meaning as in the Protection of the Environment Administration Act 1991

EPA Means Environment Protection Authority of New South Wales.

fee-based activity classification

Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations

(General) Regulation 2009.

general solid waste (non-putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



flow weighted composite sample Means a sample whose composites are sized in proportion to the flow at each composites time of collection

general solid waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act (putrescible)

grab sample Means a single sample taken at a point at a single time

hazardous waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

licensee Means the licence holder described at the front of this licence

load calculation protocol

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

local authority Has the same meaning as in the Protection of the Environment Operations Act 1997

material harm Has the same meaning as in section 147 Protection of the Environment Operations Act 1997

MBAS Means methylene blue active substances

Minister Means the Minister administering the Protection of the Environment Operations Act 1997

mobile plant Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

motor vehicle Has the same meaning as in the Protection of the Environment Operations Act 1997

O&G Means oil and grease

percentile [in relation to a concentration limit of a sample]

Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

plant Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as

motor vehicles.

pollution of waters [or water pollution] Has the same meaning as in the Protection of the Environment Operations Act 1997

premises Means the premises described in condition A2.1

Has the same meaning as in the Protection of the Environment Operations Act 1997 public authority

regional office Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence

reporting period For the purposes of this licence, the reporting period means the period of 12 months after the issue of the

licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary

of the date of issue or last renewal of the licence following the commencement of the Act.

restricted solid waste

TM

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

scheduled activity Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act special waste

1997

Together with a number, means a test method of that number prescribed by the Approved Methods for the

Sampling and Analysis of Air Pollutants in New South Wales.

Licence - 1024



TSP Means total suspended particles

TSS Means total suspended solids

Type 1 substance

Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.

more of those elements

Type 2 substance Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any

compound containing one or more of those elements

utilisation area Means any area shown as a utilisation area on a map submitted with the application for this licence

waste Has the same meaning as in the Protection of the Environment Operations Act 1997

waste type Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-

putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 19-June-2000

End Notes

- 1 Licence transferred through application 141325, approved on 16-Jul-2002, which came into effect on 01-Jul-2002.
- 2 Licence varied by notice 1021300, issued on 05-Nov-2002, which came into effect on 05-Nov-2002.
- 3 Licence varied by Admin corrections to archived record, issued on 02-Dec-2002, which came into effect on 02-Dec-2002.
- 4 Licence varied by notice 1072214, issued on 17-Oct-2007, which came into effect on 17-Oct-2007.
- 5 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 6 Licence varied by notice 1104803, issued on 12-Nov-2009, which came into effect on 12-Nov-2009.
- 7 Licence varied by correction to DECCW Region data record, issued on 13-Jul-2010, which came into effect on 13-Jul-2010.
- 8 Licence varied by correction to scheduled activity name, issued on 22-Dec-2010, which came into effect on 22-Dec-2010.

Licence - 1024



GLAXOSMITHKLINE AUSTRALIA PTY LTD ABN 47 100 162 481 LOCKED BAG 3 ERMINGTON NSW 2115

Attention: Anthony Murray

Notice Number 1529464
File Number EF13/2984
Date 01-Jun-2015

NOTICE OF VARIATION OF LICENCE NO. 1024

BACKGROUND

- A. GLAXOSMITHKLINE AUSTRALIA PTY LTD ("the licensee") is the holder of Environment Protection Licence No. 1024 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at 82 HUGHES AVENUE, ERMINGTON, NSW, 2115 ("the premises").
- B. Due to an upgrade in the Environment Protection Authority's (EPA) licensing system, minor format changes have occurred to the Licence.
- C. A draft of this licence variation was sent to the licensee for review and comment on Tuesday 19 May 2015.
- D. The licensee replied by email on Sunday 24 May 2015 that there were no comments.
- E. Therefore the EPA has issued this licence variation.

F. VARIATION OF LICENCE NO. 1024

- 1. By this notice the EPA varies licence No. 1024. The attached licence document contains all variations that are made to the licence by this notice.
- 2. The following variations have been made to the licence:
- Licence conditions in the current Licence that are not relevant to the Premises or that have previously
 contained "not applicable" have been removed from this variation. As a result, condition numbering has
 changed throughout the Licence. All conditions that are in the current Licence are included in this
 variation notice unless detailed below.
- Licence condition A4 Information supplied to the EPA is now referred to as A3 Information supplied to the EPA in the Licence.



- Licence condition L5 Waste is now referred to as L2 Waste in the Licence.
- Licence Condition L5.1 is now referred to as L2.1.
- L2.1 has been varied to include a waste table. The waste table lists the wastes that are permitted to be received at the Premises with this Licence and includes a description of the waste, the activity that waste may be used for at the Premises and any other limits.
- Licence condition M4 Recording of pollution complaints is now referred to as M2 Recording of pollution complaints in the Licence.
- Licence condition **O3.1** changed to require a **Pollution Incident Response Management Plan** (PIRMP).
- Licence condition R1.9 has been deleted as it is no longer relevant.

Jacqueline Ingham
Unit Head
Waste & Resources - Waste Management
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (http://www.epa.nsw.gov.au/prpoeo/index.htm) in accordance with section 308 of the Act.

Appeals against this decision

• You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.



When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Licence - 1024



Licence Details	
Number:	1024
Anniversary Date:	28-February

Licensee GLAXOSMITHKLINE AUSTRALIA PTY LTD LOCKED BAG 3 ERMINGTON NSW 2115

Premises
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON NSW 2115

Scheduled Activity	
Chemical Production	

Fee Based Activity	<u>Scale</u>
Chemical production waste generation	> 5-100 T generated or stored
Pharmaceutical and veterinary products production	0-2000 T produced

Region
Waste & Resources - Waste Management
59-61 Goulburn Street
SYDNEY NSW 2000
Phone: (02) 9995 5000
Fax: (02) 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232





INF	ORMATION ABOUT THIS LICENCE	2
Dic	etionary	4
Re	sponsibilities of licensee	4
Va	riation of licence conditions	4
Du	ration of licence	4
Lic	ence review	2
Fee	es and annual return to be sent to the EPA	2
Tra	ansfer of licence	Ę
Pul	blic register and access to monitoring data	Ę
1	ADMINISTRATIVE CONDITIONS	6
A1	What the licence authorises and regulates	6
A2	Premises or plant to which this licence applies	E
А3	Information supplied to the EPA	6
2	DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1	Location of monitoring/discharge points and areas	7
3	LIMIT CONDITIONS	7
L1	Pollution of waters	7
L2	Waste	7
4	OPERATING CONDITIONS	7
01	Activities must be carried out in a competent manner	7
02	Maintenance of plant and equipment	٤
О3	Emergency response	٤
04	Processes and management	٤
O5	Waste management	8
5	MONITORING AND RECORDING CONDITIONS	S
M1	Monitoring records	ć
M2	Recording of pollution complaints 1	(
МЗ	Telephone complaints line 1	(
6	REPORTING CONDITIONS1	(
R1	Annual return documents 1	(
R2	Notification of environmental harm 1	•
R3	Written report 1	1
7	GENERAL CONDITIONS1	2
G1	Copy of licence kept at the premises or plant1	,



Licence - 1024

DICTIONARY		13
General Diction	ary	13

Licence - 1024



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Licence - 1024



The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

GLAXOSMITHKLINE AUSTRALIA PTY LTD
LOCKED BAG 3
ERMINGTON NSW 2115

subject to the conditions which follow.

Licence - 1024



1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical Production	Chemical production waste generation	> 5 - 100 T generated or stored
Chemical Production	Pharmaceutical and veterinary products production	0 - 2000 T produced

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON
NSW 2115
LOT 3 DP 602080

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

Licence - 1024



P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

L2.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005	As specified in each particular resource recovery exemption	NA
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

Licence - 1024



- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident

O4 Processes and management

- O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the DECC Waste Classification Guidelines as in force from time to time.
- O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Waste management

- O5.1 The licensee must ensure that the handling, labelling, containment, storage and disposal of clinical and sharps wastes are carried out in accordance with the "Waste Management Guidelines for Health Care Facilities", 1998, issued by the NSW Department of Health.
- O5.2 Without limiting to O5.1, the licensee must ensure that:
 - (a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment;
 - (b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage;
 - (c) no radioactive substance as defined by the Radiation Control Act, 1990 is mixe or stored with any of the clinical wastes;

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



- (d) bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times;
- (e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording 'Clinical Wastes' along with the biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health;
- (f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected before being reuses; and
- (g) where second hand containers are used, all other irrelevant markings shall be obliterated.
- O5.3 In addition to O5.1, the licensee must ensure that;
 - (a) sharps are segregated by the use of enclosed rigid ompenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in waste bags labelled 'Clinical Wastes' along with the appropriate biohazard symbol;
 - (b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled 'Cytotoxic Wastes' along with the appropriate biohazard symbol; and
 - (c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids andthat comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

Licence - 1024



M2 Recording of pollution complaints

- M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M2.2 The record must include details of the following:
 - a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

- M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
 - a) a Statement of Compliance; and
 - b) a Monitoring and Complaints Summary.
 - At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.
- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.
- Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.
- R1.3 Where this licence is transferred from the licensee to a new licensee:

Licence - 1024



- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
 - a) in relation to the surrender of a licence the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence the date from which notice revoking the licence operates.
- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
 - a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.
- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
 - a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
 - and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

Licence - 1024



- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
 - a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



Dictionary

General Dictionary

3DGM [in relation
to a concentration
limit1

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act Means the Protection of the Environment Operations Act 1997

activityMeans a scheduled or non-scheduled activity within the meaning of the Protection of the Environment

Operations Act 1997

actual load Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

AM Together with a number, means an ambient air monitoring method of that number prescribed by the

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

AMG Australian Map Grid

anniversary date The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a

licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the

commencement of the Act.

annual return Is defined in R1.1

Approved Methods Publication

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

assessable pollutants

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

BOD Means biochemical oxygen demand

CEM Together with a number, means a continuous emission monitoring method of that number prescribed by

the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

COD Means chemical oxygen demand

composite sample Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples

collected at hourly intervals and each having an equivalent volume.

cond. Means conductivity

environment Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation

Has the same meaning as in the Protection of the Environment Administration Act 1991

EPA Means Environment Protection Authority of New South Wales.

fee-based activity classification

Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations

(General) Regulation 2009.

general solid waste (non-putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Licence - 1024



flow weighted composite sample Means a sample whose composites are sized in proportion to the flow at each composites time of collection

general solid waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act (putrescible)

grab sample Means a single sample taken at a point at a single time

hazardous waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

licensee Means the licence holder described at the front of this licence

load calculation protocol

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

local authority Has the same meaning as in the Protection of the Environment Operations Act 1997

material harm Has the same meaning as in section 147 Protection of the Environment Operations Act 1997

MBAS Means methylene blue active substances

Minister Means the Minister administering the Protection of the Environment Operations Act 1997

mobile plant Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

motor vehicle Has the same meaning as in the Protection of the Environment Operations Act 1997

O&G Means oil and grease

percentile [in relation to a concentration limit of a sample]

Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

plant Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as

motor vehicles.

pollution of waters [or water pollution] Has the same meaning as in the Protection of the Environment Operations Act 1997

premises Means the premises described in condition A2.1

Has the same meaning as in the Protection of the Environment Operations Act 1997 public authority

regional office Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence

For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary

of the date of issue or last renewal of the licence following the commencement of the Act.

restricted solid waste

reporting period

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

scheduled activity Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act special waste

1997

TM Together with a number, means a test method of that number prescribed by the Approved Methods for the

Sampling and Analysis of Air Pollutants in New South Wales.

Licence - 1024



TSP Means total suspended particles

TSS Means total suspended solids

Type 1 substance

Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.

more of those elements

Type 2 substance Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any

compound containing one or more of those elements

utilisation area Means any area shown as a utilisation area on a map submitted with the application for this licence

waste Has the same meaning as in the Protection of the Environment Operations Act 1997

waste type Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-

putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 19-June-2000

End Notes

- 1 Licence transferred through application 141325, approved on 16-Jul-2002, which came into effect on 01-Jul-2002.
- 2 Licence varied by notice 1021300, issued on 05-Nov-2002, which came into effect on 05-Nov-2002.
- 3 Licence varied by Admin corrections to archived record, issued on 02-Dec-2002, which came into effect on 02-Dec-2002.
- 4 Licence varied by notice 1072214, issued on 17-Oct-2007, which came into effect on 17-Oct-2007.
- 5 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 6 Licence varied by notice 1104803, issued on 12-Nov-2009, which came into effect on 12-Nov-2009.
- 7 Licence varied by correction to DECCW Region data record, issued on 13-Jul-2010, which came into effect on 13-Jul-2010.
- 8 Licence varied by correction to scheduled activity name, issued on 22-Dec-2010, which came into effect on 22-Dec-2010.

Licence - 1024



GLAXOSMITHKLINE AUSTRALIA PTY LTD ABN 47 100 162 481 LOCKED BAG 3 ERMINGTON NSW 2115

Attention: Anthony Murray

Notice Number 1529464
File Number EF13/2984
Date 01-Jun-2015

NOTICE OF VARIATION OF LICENCE NO. 1024

BACKGROUND

- A. GLAXOSMITHKLINE AUSTRALIA PTY LTD ("the licensee") is the holder of Environment Protection Licence No. 1024 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at 82 HUGHES AVENUE, ERMINGTON, NSW, 2115 ("the premises").
- B. Due to an upgrade in the Environment Protection Authority's (EPA) licensing system, minor format changes have occurred to the Licence.
- C. A draft of this licence variation was sent to the licensee for review and comment on Tuesday 19 May 2015.
- D. The licensee replied by email on Sunday 24 May 2015 that there were no comments.
- E. Therefore the EPA has issued this licence variation.

F. VARIATION OF LICENCE NO. 1024

- 1. By this notice the EPA varies licence No. 1024. The attached licence document contains all variations that are made to the licence by this notice.
- 2. The following variations have been made to the licence:
- Licence conditions in the current Licence that are not relevant to the Premises or that have previously
 contained "not applicable" have been removed from this variation. As a result, condition numbering has
 changed throughout the Licence. All conditions that are in the current Licence are included in this
 variation notice unless detailed below.
- Licence condition A4 Information supplied to the EPA is now referred to as A3 Information supplied to the EPA in the Licence.



- Licence condition L5 Waste is now referred to as L2 Waste in the Licence.
- Licence Condition L5.1 is now referred to as L2.1.
- L2.1 has been varied to include a waste table. The waste table lists the wastes that are permitted to be received at the Premises with this Licence and includes a description of the waste, the activity that waste may be used for at the Premises and any other limits.
- Licence condition M4 Recording of pollution complaints is now referred to as M2 Recording of pollution complaints in the Licence.
- Licence condition **O3.1** changed to require a **Pollution Incident Response Management Plan** (PIRMP).
- Licence condition R1.9 has been deleted as it is no longer relevant.

Jacqueline Ingham
Unit Head
Waste & Resources - Waste Management
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (http://www.epa.nsw.gov.au/prpoeo/index.htm) in accordance with section 308 of the Act.

Appeals against this decision

• You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.



When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Licence - 1024



Licence Details	
Number:	1024
Anniversary Date:	28-February

Licensee GLAXOSMITHKLINE AUSTRALIA PTY LTD LOCKED BAG 3 ERMINGTON NSW 2115

Premises
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON NSW 2115

Scheduled Activity	
Chemical Production	

Fee Based Activity	<u>Scale</u>
Chemical production waste generation	> 5-100 T generated or stored
Pharmaceutical and veterinary products production	0-2000 T produced

Region
Waste & Resources - Waste Management
59-61 Goulburn Street
SYDNEY NSW 2000
Phone: (02) 9995 5000
Fax: (02) 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232





INF	ORMATION ABOUT THIS LICENCE	2
Dic	etionary	4
Re	sponsibilities of licensee	4
Va	riation of licence conditions	4
Du	ration of licence	4
Lic	ence review	2
Fee	es and annual return to be sent to the EPA	2
Tra	ansfer of licence	Ę
Pul	blic register and access to monitoring data	Ę
1	ADMINISTRATIVE CONDITIONS	6
A1	What the licence authorises and regulates	6
A2	Premises or plant to which this licence applies	E
А3	Information supplied to the EPA	6
2	DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1	Location of monitoring/discharge points and areas	7
3	LIMIT CONDITIONS	7
L1	Pollution of waters	7
L2	Waste	7
4	OPERATING CONDITIONS	7
01	Activities must be carried out in a competent manner	7
02	Maintenance of plant and equipment	٤
О3	Emergency response	٤
04	Processes and management	٤
O5	Waste management	8
5	MONITORING AND RECORDING CONDITIONS	S
M1	Monitoring records	ć
M2	Recording of pollution complaints 1	(
МЗ	Telephone complaints line 1	(
6	REPORTING CONDITIONS1	(
R1	Annual return documents 1	(
R2	Notification of environmental harm 1	•
R3	Written report 1	1
7	GENERAL CONDITIONS1	2
G1	Copy of licence kept at the premises or plant1	,



Licence - 1024

DICTIONARY		13
General Diction	ary	13

Licence - 1024



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Licence - 1024



The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

GLAXOSMITHKLINE AUSTRALIA PTY LTD
LOCKED BAG 3
ERMINGTON NSW 2115

subject to the conditions which follow.

Licence - 1024



1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical Production	Chemical production waste generation	> 5 - 100 T generated or stored
Chemical Production	Pharmaceutical and veterinary products production	0 - 2000 T produced

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON
NSW 2115
LOT 3 DP 602080

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

Licence - 1024



P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

L2.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005	As specified in each particular resource recovery exemption	NA
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

Licence - 1024



- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident

O4 Processes and management

- O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the DECC Waste Classification Guidelines as in force from time to time.
- O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Waste management

- O5.1 The licensee must ensure that the handling, labelling, containment, storage and disposal of clinical and sharps wastes are carried out in accordance with the "Waste Management Guidelines for Health Care Facilities", 1998, issued by the NSW Department of Health.
- O5.2 Without limiting to O5.1, the licensee must ensure that:
 - (a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment;
 - (b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage;
 - (c) no radioactive substance as defined by the Radiation Control Act, 1990 is mixe or stored with any of the clinical wastes;

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



- (d) bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times;
- (e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording 'Clinical Wastes' along with the biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health;
- (f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected before being reuses; and
- (g) where second hand containers are used, all other irrelevant markings shall be obliterated.
- O5.3 In addition to O5.1, the licensee must ensure that;
 - (a) sharps are segregated by the use of enclosed rigid ompenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in waste bags labelled 'Clinical Wastes' along with the appropriate biohazard symbol;
 - (b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled 'Cytotoxic Wastes' along with the appropriate biohazard symbol; and
 - (c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids andthat comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

Licence - 1024



M2 Recording of pollution complaints

- M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M2.2 The record must include details of the following:
 - a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

- M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
 - a) a Statement of Compliance; and
 - b) a Monitoring and Complaints Summary.
 - At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.
- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.
- Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.
- R1.3 Where this licence is transferred from the licensee to a new licensee:

Licence - 1024



- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
 - a) in relation to the surrender of a licence the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence the date from which notice revoking the licence operates.
- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
 - a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.
- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
 - a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
 - and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

Licence - 1024



- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
 - a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



Dictionary

General Dictionary

3DGM [in relation
to a concentration
limit1

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act Means the Protection of the Environment Operations Act 1997

activityMeans a scheduled or non-scheduled activity within the meaning of the Protection of the Environment

Operations Act 1997

actual load Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

AM Together with a number, means an ambient air monitoring method of that number prescribed by the

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

AMG Australian Map Grid

anniversary date The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a

licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the

commencement of the Act.

annual return Is defined in R1.1

Approved Methods Publication

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

assessable pollutants

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

BOD Means biochemical oxygen demand

CEM Together with a number, means a continuous emission monitoring method of that number prescribed by

the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

COD Means chemical oxygen demand

composite sample Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples

collected at hourly intervals and each having an equivalent volume.

cond. Means conductivity

environment Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation

Has the same meaning as in the Protection of the Environment Administration Act 1991

EPA Means Environment Protection Authority of New South Wales.

fee-based activity classification

Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations

(General) Regulation 2009.

general solid waste (non-putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Licence - 1024



flow weighted composite sample Means a sample whose composites are sized in proportion to the flow at each composites time of collection

general solid waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act (putrescible)

grab sample Means a single sample taken at a point at a single time

hazardous waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

licensee Means the licence holder described at the front of this licence

load calculation protocol

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

local authority Has the same meaning as in the Protection of the Environment Operations Act 1997

material harm Has the same meaning as in section 147 Protection of the Environment Operations Act 1997

MBAS Means methylene blue active substances

Minister Means the Minister administering the Protection of the Environment Operations Act 1997

mobile plant Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

motor vehicle Has the same meaning as in the Protection of the Environment Operations Act 1997

O&G Means oil and grease

percentile [in relation to a concentration limit of a sample]

Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

plant Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as

motor vehicles.

pollution of waters [or water pollution] Has the same meaning as in the Protection of the Environment Operations Act 1997

premises Means the premises described in condition A2.1

Has the same meaning as in the Protection of the Environment Operations Act 1997 public authority

regional office Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence

For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary

of the date of issue or last renewal of the licence following the commencement of the Act.

restricted solid waste

reporting period

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

scheduled activity Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act special waste

1997

TM Together with a number, means a test method of that number prescribed by the Approved Methods for the

Sampling and Analysis of Air Pollutants in New South Wales.

Licence - 1024



TSP Means total suspended particles

TSS Means total suspended solids

Type 1 substance

Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.

more of those elements

Type 2 substance Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any

compound containing one or more of those elements

utilisation area Means any area shown as a utilisation area on a map submitted with the application for this licence

waste Has the same meaning as in the Protection of the Environment Operations Act 1997

waste type Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-

putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 19-June-2000

End Notes

- 1 Licence transferred through application 141325, approved on 16-Jul-2002, which came into effect on 01-Jul-2002.
- 2 Licence varied by notice 1021300, issued on 05-Nov-2002, which came into effect on 05-Nov-2002.
- 3 Licence varied by Admin corrections to archived record, issued on 02-Dec-2002, which came into effect on 02-Dec-2002.
- 4 Licence varied by notice 1072214, issued on 17-Oct-2007, which came into effect on 17-Oct-2007.
- 5 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 6 Licence varied by notice 1104803, issued on 12-Nov-2009, which came into effect on 12-Nov-2009.
- 7 Licence varied by correction to DECCW Region data record, issued on 13-Jul-2010, which came into effect on 13-Jul-2010.
- 8 Licence varied by correction to scheduled activity name, issued on 22-Dec-2010, which came into effect on 22-Dec-2010.

Licence - 1024



GLAXOSMITHKLINE AUSTRALIA PTY LTD ABN 47 100 162 481 LOCKED BAG 3 ERMINGTON NSW 2115

Attention: Anthony Murray

Notice Number 1529464
File Number EF13/2984
Date 01-Jun-2015

NOTICE OF VARIATION OF LICENCE NO. 1024

BACKGROUND

- A. GLAXOSMITHKLINE AUSTRALIA PTY LTD ("the licensee") is the holder of Environment Protection Licence No. 1024 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at 82 HUGHES AVENUE, ERMINGTON, NSW, 2115 ("the premises").
- B. Due to an upgrade in the Environment Protection Authority's (EPA) licensing system, minor format changes have occurred to the Licence.
- C. A draft of this licence variation was sent to the licensee for review and comment on Tuesday 19 May 2015.
- D. The licensee replied by email on Sunday 24 May 2015 that there were no comments.
- E. Therefore the EPA has issued this licence variation.

F. VARIATION OF LICENCE NO. 1024

- 1. By this notice the EPA varies licence No. 1024. The attached licence document contains all variations that are made to the licence by this notice.
- 2. The following variations have been made to the licence:
- Licence conditions in the current Licence that are not relevant to the Premises or that have previously
 contained "not applicable" have been removed from this variation. As a result, condition numbering has
 changed throughout the Licence. All conditions that are in the current Licence are included in this
 variation notice unless detailed below.
- Licence condition A4 Information supplied to the EPA is now referred to as A3 Information supplied to the EPA in the Licence.



- Licence condition L5 Waste is now referred to as L2 Waste in the Licence.
- Licence Condition L5.1 is now referred to as L2.1.
- L2.1 has been varied to include a waste table. The waste table lists the wastes that are permitted to be received at the Premises with this Licence and includes a description of the waste, the activity that waste may be used for at the Premises and any other limits.
- Licence condition M4 Recording of pollution complaints is now referred to as M2 Recording of pollution complaints in the Licence.
- Licence condition **O3.1** changed to require a **Pollution Incident Response Management Plan** (PIRMP).
- Licence condition R1.9 has been deleted as it is no longer relevant.

Jacqueline Ingham
Unit Head
Waste & Resources - Waste Management
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (http://www.epa.nsw.gov.au/prpoeo/index.htm) in accordance with section 308 of the Act.

Appeals against this decision

• You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

Licence Variation



When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Licence - 1024



Licence Details	
Number:	1024
Anniversary Date:	28-February

Licensee GLAXOSMITHKLINE AUSTRALIA PTY LTD LOCKED BAG 3 ERMINGTON NSW 2115

Premises
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON NSW 2115

Scheduled Activity	
Chemical Production	

Fee Based Activity	<u>Scale</u>
Chemical production waste generation	> 5-100 T generated or stored
Pharmaceutical and veterinary products production	0-2000 T produced

Region
Waste & Resources - Waste Management
59-61 Goulburn Street
SYDNEY NSW 2000
Phone: (02) 9995 5000
Fax: (02) 9995 5999
PO Box A290 SYDNEY SOUTH
NSW 1232





INF	ORMATION ABOUT THIS LICENCE	2
Dic	etionary	4
Re	sponsibilities of licensee	4
Va	riation of licence conditions	4
Du	ration of licence	4
Lic	ence review	2
Fee	es and annual return to be sent to the EPA	2
Tra	ansfer of licence	Ę
Pul	blic register and access to monitoring data	Ę
1	ADMINISTRATIVE CONDITIONS	6
A1	What the licence authorises and regulates	6
A2	Premises or plant to which this licence applies	E
А3	Information supplied to the EPA	6
2	DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1	Location of monitoring/discharge points and areas	7
3	LIMIT CONDITIONS	7
L1	Pollution of waters	7
L2	Waste	7
4	OPERATING CONDITIONS	7
01	Activities must be carried out in a competent manner	7
02	Maintenance of plant and equipment	٤
О3	Emergency response	8
04	Processes and management	٤
O5	Waste management	8
5	MONITORING AND RECORDING CONDITIONS	S
M1	Monitoring records	ć
M2	Recording of pollution complaints 1	(
МЗ	Telephone complaints line 1	(
6	REPORTING CONDITIONS1	(
R1	Annual return documents 1	(
R2	Notification of environmental harm 1	•
R3	Written report 1	1
7	GENERAL CONDITIONS1	2
G1	Copy of licence kept at the premises or plant1	,



Licence - 1024

DICTIONARY		13
General Diction	ary	13

Licence - 1024



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Licence - 1024



The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

GLAXOSMITHKLINE AUSTRALIA PTY LTD
LOCKED BAG 3
ERMINGTON NSW 2115

subject to the conditions which follow.

Licence - 1024



1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical Production	Chemical production waste generation	> 5 - 100 T generated or stored
Chemical Production	Pharmaceutical and veterinary products production	0 - 2000 T produced

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON
NSW 2115
LOT 3 DP 602080

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

Licence - 1024



P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

L2.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005	As specified in each particular resource recovery exemption	NA
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

Licence - 1024



- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident

O4 Processes and management

- O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the DECC Waste Classification Guidelines as in force from time to time.
- O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Waste management

- O5.1 The licensee must ensure that the handling, labelling, containment, storage and disposal of clinical and sharps wastes are carried out in accordance with the "Waste Management Guidelines for Health Care Facilities", 1998, issued by the NSW Department of Health.
- O5.2 Without limiting to O5.1, the licensee must ensure that:
 - (a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment;
 - (b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage;
 - (c) no radioactive substance as defined by the Radiation Control Act, 1990 is mixe or stored with any of the clinical wastes;

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



- (d) bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times;
- (e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording 'Clinical Wastes' along with the biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health;
- (f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected before being reuses; and
- (g) where second hand containers are used, all other irrelevant markings shall be obliterated.
- O5.3 In addition to O5.1, the licensee must ensure that;
 - (a) sharps are segregated by the use of enclosed rigid ompenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in waste bags labelled 'Clinical Wastes' along with the appropriate biohazard symbol;
 - (b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled 'Cytotoxic Wastes' along with the appropriate biohazard symbol; and
 - (c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids andthat comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

Licence - 1024



M2 Recording of pollution complaints

- M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M2.2 The record must include details of the following:
 - a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

- M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
 - a) a Statement of Compliance; and
 - b) a Monitoring and Complaints Summary.
 - At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.
- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.
- Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.
- R1.3 Where this licence is transferred from the licensee to a new licensee:

Licence - 1024



- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
 - a) in relation to the surrender of a licence the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence the date from which notice revoking the licence operates.
- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
 - a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.
- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
 - a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
 - and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

Licence - 1024



- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
 - a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Authority - NSW Licence version date: 1-Jun-2015

Licence - 1024



Dictionary

General Dictionary

3DGM [in relation
to a concentration
limit1

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act Means the Protection of the Environment Operations Act 1997

activityMeans a scheduled or non-scheduled activity within the meaning of the Protection of the Environment

Operations Act 1997

actual load Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

AM Together with a number, means an ambient air monitoring method of that number prescribed by the

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

AMG Australian Map Grid

anniversary date The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a

licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the

commencement of the Act.

annual return Is defined in R1.1

Approved Methods Publication

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

assessable pollutants

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

BOD Means biochemical oxygen demand

CEM Together with a number, means a continuous emission monitoring method of that number prescribed by

the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

COD Means chemical oxygen demand

composite sample Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples

collected at hourly intervals and each having an equivalent volume.

cond. Means conductivity

environment Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation

Has the same meaning as in the Protection of the Environment Administration Act 1991

EPA Means Environment Protection Authority of New South Wales.

fee-based activity classification

Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations

(General) Regulation 2009.

general solid waste (non-putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Licence - 1024



flow weighted composite sample Means a sample whose composites are sized in proportion to the flow at each composites time of collection

general solid waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act (putrescible)

grab sample Means a single sample taken at a point at a single time

hazardous waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

licensee Means the licence holder described at the front of this licence

load calculation protocol

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

local authority Has the same meaning as in the Protection of the Environment Operations Act 1997

material harm Has the same meaning as in section 147 Protection of the Environment Operations Act 1997

MBAS Means methylene blue active substances

Minister Means the Minister administering the Protection of the Environment Operations Act 1997

mobile plant Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

motor vehicle Has the same meaning as in the Protection of the Environment Operations Act 1997

O&G Means oil and grease

percentile [in relation to a concentration limit of a sample]

Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

plant Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as

motor vehicles.

pollution of waters [or water pollution] Has the same meaning as in the Protection of the Environment Operations Act 1997

premises Means the premises described in condition A2.1

Has the same meaning as in the Protection of the Environment Operations Act 1997 public authority

regional office Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence

For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary

of the date of issue or last renewal of the licence following the commencement of the Act.

restricted solid waste

reporting period

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

scheduled activity Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act special waste

1997

TM Together with a number, means a test method of that number prescribed by the Approved Methods for the

Sampling and Analysis of Air Pollutants in New South Wales.

Licence - 1024



TSP Means total suspended particles

TSS Means total suspended solids

Type 1 substance

Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements.

more of those elements

Type 2 substance Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any

compound containing one or more of those elements

utilisation area Means any area shown as a utilisation area on a map submitted with the application for this licence

waste Has the same meaning as in the Protection of the Environment Operations Act 1997

waste type Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-

putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 19-June-2000

End Notes

- 1 Licence transferred through application 141325, approved on 16-Jul-2002, which came into effect on 01-Jul-2002.
- 2 Licence varied by notice 1021300, issued on 05-Nov-2002, which came into effect on 05-Nov-2002.
- 3 Licence varied by Admin corrections to archived record, issued on 02-Dec-2002, which came into effect on 02-Dec-2002.
- 4 Licence varied by notice 1072214, issued on 17-Oct-2007, which came into effect on 17-Oct-2007.
- 5 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 6 Licence varied by notice 1104803, issued on 12-Nov-2009, which came into effect on 12-Nov-2009.
- 7 Licence varied by correction to DECCW Region data record, issued on 13-Jul-2010, which came into effect on 13-Jul-2010.
- 8 Licence varied by correction to scheduled activity name, issued on 22-Dec-2010, which came into effect on 22-Dec-2010.

Licence Variation

Licence - 1024



GLAXOSMITHKLINE CONSUMER HEALTHCARE AUSTRALIA PTY LTD ABN 68 603 310 292 ACN 603 310 292 LOCKED BAG 3 ERMINGTON NSW 2115

Attention: Amapola Maher

Notice Number 1534833

File Number EF15/16571

Date 15-Dec-2015

NOTICE OF VARIATION OF LICENCE NO. 1024

BACKGROUND

- A. GLAXOSMITHKLINE CONSUMER HEALTHCARE AUSTRALIA PTY LTD ("the licensee") is the holder of Environment Protection Licence No. 1024 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at 82 HUGHES AVENUE, ERMINGTON, NSW, 2115 ("the premises").
- B. On 06-Oct-2015 the Environment Protection Authority (EPA) received an application for the variation of the licence.
- C. GlaxoSmithKline Consumer Healthcare Australia Pty Ltd applied to vary the licence Fee based activity and scale, to include;
 - Pharmaceutical or veterinary products production, at a scale of "more than 2,000 but not more than 5,000 tonnes", and;
 - Chemical production waste generation, at a scale of "more than 100 tonnes".
- D. On 4 & 9 November 2015 the EPA requested for the Development Consent issued to the Licensee in order to ascertain the environmental impacts that would be associated with the increase in the scale of the licensed activity.
- E. On 7 December 2015 the Licensee notified the EPA that a development consent did not exist, because the activity had been undertaken at the Premises since 1956. GlaxoSmithKline submitted an environment impact statement which addressed the risks associated with an increase in production level.
- D. On 14 December 2015, a draft Licence Variation Notice No. 1534833 was sent to the Licensee for review and comment.
- E. On 15 December 2015, the EPA received correspondence from the Licensee stating they have no objections to any of the changes proposed in the variation notice.

Licence Variation



F. The EPA has considered the information provided and has now issued the Licence Variation.

VARIATION OF LICENCE NO. 1024

- By this notice the EPA varies licence No. 1024. The attached licence document contains all variations that are made to the licence by this notice.
- 2. The following variations have been made to the licence:
 - The activity scale and classification for Fee based activities in Condition A1.1 has been amended as in C above.

Jacqueline Ingham
Unit Head
Waste & Resources - Waste Management
(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (http://www.epa.nsw.gov.au/prpoeo/index.htm) in accordance with section 308 of the Act.

Appeals against this decision

 You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Licence - 1024



Licence Details	
Number:	1024
Anniversary Date:	28-February

Licensee GLAXOSMITHKLINE CONSUMER HEALTHCARE AUSTRALIA PTY LTD LOCKED BAG 3 ERMINGTON NSW 2115

Premises
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON NSW 2115
ERMINGTON NSW 2115

Scheduled Activity Chemical Production

Fee Based Activity	<u>Scale</u>
Chemical production waste generation	> 100 T generated or stored
Pharmaceutical and veterinary products production	> 2000-5000 T produced

Region			
Waste & Resources - Waste Management			
59-61 Goulburn Street			
SYDNEY NSW 2000			
Phone: (02) 9995 5000			
Fax: (02) 9995 5999			
PO Box A290 SYDNEY SOUTH			
NSW 1232			





INF	ORMATION ABOUT THIS LICENCE	2
Dic	etionary	4
Re	sponsibilities of licensee	4
Va	riation of licence conditions	4
Du	ration of licence	4
Lic	ence review	2
Fee	es and annual return to be sent to the EPA	2
Tra	ansfer of licence	Ę
Pul	blic register and access to monitoring data	Ę
1	ADMINISTRATIVE CONDITIONS	6
A1	What the licence authorises and regulates	6
A2	Premises or plant to which this licence applies	E
А3	Information supplied to the EPA	6
2	DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	7
P1	Location of monitoring/discharge points and areas	7
3	LIMIT CONDITIONS	7
L1	Pollution of waters	7
L2	Waste	7
4	OPERATING CONDITIONS	7
01	Activities must be carried out in a competent manner	7
02	Maintenance of plant and equipment	٤
О3	Emergency response	8
04	Processes and management	٤
O5	Waste management	8
5	MONITORING AND RECORDING CONDITIONS	S
M1	Monitoring records	ć
M2	Recording of pollution complaints 1	(
МЗ	Telephone complaints line 1	(
6	REPORTING CONDITIONS1	(
R1	Annual return documents 1	(
R2	Notification of environmental harm 1	•
R3	Written report 1	1
7	GENERAL CONDITIONS1	2
G1	Copy of licence kept at the premises or plant1	,



Licence - 1024

DICTIONARY		13
General Diction	ary	13

Licence - 1024



Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Licence - 1024



The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

GLAXOSMITHKLINE CONSUMER HEALTHCARE AUSTRALIA PTY LTD
LOCKED BAG 3
ERMINGTON NSW 2115

subject to the conditions which follow.

Licence - 1024



1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical Production	Chemical production waste generation	> 100 T generated or stored
Chemical Production	Pharmaceutical and veterinary products production	> 2000 - 5000 T produced

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GLAXOSMITHKLINE
82 HUGHES AVENUE
ERMINGTON
NSW 2115
LOT 3 DP 602080

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

Licence - 1024



P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Waste

L2.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the Protection of the Environment Operations (Waste) Regulation 2005	As specified in each particular resource recovery exemption	NA
NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time	-	NA

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

Licence - 1024



- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) must be maintained in a proper and efficient condition; and
 - b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident

O4 Processes and management

- O4.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the DECC Waste Classification Guidelines as in force from time to time.
- O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Waste management

- O5.1 The licensee must ensure that the handling, labelling, containment, storage and disposal of clinical and sharps wastes are carried out in accordance with the "Waste Management Guidelines for Health Care Facilities", 1998, issued by the NSW Department of Health.
- O5.2 Without limiting to O5.1, the licensee must ensure that:
 - (a) clinical wastes are stored or contained in a weather proof secure location isolated from any other wastes, and that the storage area is maintained in a condition which presents no threat to the environment;
 - (b) the storage area for clinical wastes contains all necessary equipment required to clean and disinfect the area in case of spillage;
 - (c) no radioactive substance as defined by the Radiation Control Act, 1990 is mixe or stored with any of the clinical wastes;

Environment Protection Authority - NSW Licence version date: 15-Dec-2015

Licence - 1024



- (d) bagged clinical wastes are stored and transported in rigid containers which are leak proof, shatter proof, washable and have securely fitting lids to prevent spills at all times;
- (e) bags and containers used for storage and transport of clinical wastes are colour coded and clearly marked with the wording 'Clinical Wastes' along with the biological hazard symbol in accordance with the requirements of the Waste Management Guidelines for Health Care Facilities, 1998, issued by the NSW Department of Health;
- (f) containers used for clinical waste which are to be reused must be thoroughly cleansed and disinfected before being reuses; and
- (g) where second hand containers are used, all other irrelevant markings shall be obliterated.
- O5.3 In addition to O5.1, the licensee must ensure that;
 - (a) sharps are segregated by the use of enclosed rigid ompenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in waste bags labelled 'Clinical Wastes' along with the appropriate biohazard symbol;
 - (b) sharps contaminated by any residual cytotoxic drug are segregated by the use of enclosed rigid impenetrable containers that comply with Australian Standard AS/NZS 4031-1992 (non-reusable containers) and 4261-1994 (reusable containers) before disposal in cytotoxic waste bags labelled 'Cytotoxic Wastes' along with the appropriate biohazard symbol; and
 - (c) sharps are transported in rigid impenetrable containers which are leakproof, shockproof and have securely fitting lids andthat comply with Australian Standard AS/NZS 3816-1998, Management of Clinical and Related Wastes.

5 Monitoring and Recording Conditions

M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
 - a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
 - a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

Licence - 1024



M2 Recording of pollution complaints

- M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M2.2 The record must include details of the following:
 - a) the date and time of the complaint;
 - b) the method by which the complaint was made;
 - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - d) the nature of the complaint;
 - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - f) if no action was taken by the licensee, the reasons why no action was taken.
- M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M3 Telephone complaints line

- M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
 - a) a Statement of Compliance; and
 - b) a Monitoring and Complaints Summary.
 - At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.
- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.
- Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.
- R1.3 Where this licence is transferred from the licensee to a new licensee:

Environment Protection Authority - NSW Licence version date: 15-Dec-2015

Licence - 1024



- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
 - a) in relation to the surrender of a licence the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence the date from which notice revoking the licence operates.
- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
 - a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.
- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
 - a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
 - and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

Licence - 1024



- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
 - a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

Environment Protection Authority - NSW Licence version date: 15-Dec-2015

Licence - 1024



Dictionary

General Dictionary

3DGM [in relation
to a concentration
limit1

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act Means the Protection of the Environment Operations Act 1997

activityMeans a scheduled or non-scheduled activity within the meaning of the Protection of the Environment

Operations Act 1997

actual load Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

AM Together with a number, means an ambient air monitoring method of that number prescribed by the

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

AMG Australian Map Grid

anniversary date The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a

licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the

commencement of the Act.

annual return Is defined in R1.1

Approved Methods Publication

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

assessable pollutants

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

BOD Means biochemical oxygen demand

CEM Together with a number, means a continuous emission monitoring method of that number prescribed by

the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

COD Means chemical oxygen demand

composite sample Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples

collected at hourly intervals and each having an equivalent volume.

cond. Means conductivity

environment Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation Has the same meaning as in the Protection of the Environment Administration Act 1991

EPA Means Environment Protection Authority of New South Wales.

fee-based activity classification

Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations

(General) Regulation 2009.

general solid waste (non-putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Licence - 1024



flow weighted composite sample

Means a sample whose composites are sized in proportion to the flow at each composites time of collection

general solid waste (putrescible)

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act

199

grab sample Means a single sample taken at a point at a single time

hazardous waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

licensee Means the licence holder described at the front of this licence

load calculation protocol

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

local authority Has the same meaning as in the Protection of the Environment Operations Act 1997

material harm Has the same meaning as in section 147 Protection of the Environment Operations Act 1997

MBAS Means methylene blue active substances

Minister Means the Minister administering the Protection of the Environment Operations Act 1997

mobile plant Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

motor vehicle Has the same meaning as in the Protection of the Environment Operations Act 1997

O&G Means oil and grease

percentile [in relation to a concentration limit of a sample] Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.

plant Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as

motor vehicles.

pollution of waters [or water pollution]

Has the same meaning as in the Protection of the Environment Operations Act 1997

premises Means the premises described in condition A2.1

public authority Has the same meaning as in the Protection of the Environment Operations Act 1997

regional office Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence

For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary

of the date of issue or last renewal of the licence following the commencement of the Act.

restricted solid waste

TM

reporting period

ste 199

Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

scheduled activity Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997

special waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

1997

Together with a number, means a test method of that number prescribed by the Approved Methods for the

Sampling and Analysis of Air Pollutants in New South Wales.

Licence - 1024



Means total suspended particles TSP

Means total suspended solids TSS

Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or Type 1 substance

more of those elements

Type 2 substance Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any

compound containing one or more of those elements

Means any area shown as a utilisation area on a map submitted with the application for this licence utilisation area

waste Has the same meaning as in the Protection of the Environment Operations Act 1997

waste type Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-

putrescible), special waste or hazardous waste

Mr Tim Gilbert

Environment Protection Authority

(By Delegation)

Date of this edition: 19-June-2000

Licence - 1024



End Notes

- 1 Licence transferred through application 141325, approved on 16-Jul-2002, which came into effect on 01-Jul-2002.
- 2 Licence varied by notice 1021300, issued on 05-Nov-2002, which came into effect on 05-Nov-2002.
- 3 Licence varied by Admin corrections to archived record, issued on 02-Dec-2002, which came into effect on 02-Dec-2002.
- 4 Licence varied by notice 1072214, issued on 17-Oct-2007, which came into effect on 17-Oct-2007.
- 5 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 6 Licence varied by notice 1104803, issued on 12-Nov-2009, which came into effect on 12-Nov-2009.
- 7 Licence varied by correction to DECCW Region data record, issued on 13-Jul-2010, which came into effect on 13-Jul-2010.
- 8 Licence varied by correction to scheduled activity name, issued on 22-Dec-2010, which came into effect on 22-Dec-2010.
- 9 Licence varied by notice 1529464 issued on 01-Jun-2015
- 10 Licence transferred through application 1533537 approved on 02-Sep-2015, which came into effect on 01-Sep-2015

Number	Name	Location	Туре	Status	Date
1607905	GLAXOSMITHKLINE AUSTRALIA PTY LTD	82 Hughes Avenue, Ermington NSW 2115	s.80 Surrender of a Licence	Pending	1-Apr-21
1021300	GLAXOSMITHKLINE AUSTRALIA PTY LTD	82 Hughes Avenue, Ermington NSW 2115	s.58 Licence Variation	Issued	4-Nov-02
1072214	GLAXOSMITHKLINE AUSTRALIA PTY LTD	82 Hughes Avenue, Ermington NSW 2115	s.58 Licence Variation	Issued	17-Oct-07
1104803	GLAXOSMITHKLINE AUSTRALIA PTY LTD	82 Hughes Avenue, Ermington NSW 2115	s.58 Licence Variation	Issued	10-Nov-09
1529464	GLAXOSMITHKLINE AUSTRALIA PTY LTD	82 Hughes Avenue, Ermington NSW 2115	s.58 Licence Variation	Issued	1-Jun-15
1024	GLAXOSMITHKLINE AUSTRALIA PTY LTD	82 Hughes Avenue, Ermington NSW 2115	POEO Licence	Issued	19-Jun-00
1534833	GLAXOSMITHKLINE AUSTRALIA PTY LTD	82 Hughes Avenue, Ermington NSW 2115	s.58 Licence Variation	Issued	15-Dec-15





El Australia Suite 6.01, 55 Miller Street PYRMONT, NSW, 2009

ABN 42 909 129 957
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

	Instrument: Mini RAE 3000
	Serial Number: 592-906667 - El PID02 OR 592-901345 - El PID03
	Instrument Conditions:
	Calibration gas species: Isobutylene.
	Calibration gas concentration:teo_ppm
	Gas bottle number: 61:985570 Col:93
	This PID has been calibrated to Isobutylene gas with the span concentration displayed as
	ppm at ppm span setting (allowable range +/-10ppm from span setting).
	The PID is initially zero calibrated in fresh air.
	Remaining gas in bottle:psi (if reading is <250 psi, notify Equipment Manager to arrange new
	gas bottle order)
_	

The above detector was calibrated in accordance with manufacturer's specifications.

Signed: ASC

Date: 224(21

Time: 10:30 ---



El Australia Suite 6.01, 55 Miller Street PYRMONT, NSW, 2009

ABN 42 909 129 957 E service@eiaustralia.com.au W www.eiaustralia.com.au T 02 9516 0722

CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

Instrument: Mini RAE 3000
Serial Number: 592-906667 - El PID02 ☑ OR 592-901345 - El PID03 □
Instrument Conditions: Cook
Calibration gas species: Isobutylene.
Calibration gas concentration: LPD ppm
Gas bottle number: lot 935570 cyl. 93
This PID has been calibrated to Isobutylene gas with the span concentration displayed as
ppm at <u>Loo</u> ppm span setting (allowable range +/-10ppm from span setting).
The PID is initially zero calibrated in fresh air.
Remaining gas in bottle:psi (if reading is <250 psi, notify Equipment Manager to arrange new
gas bottle order)
The above detector was calibrated in accordance with manufacturer's specifications. Signed: ASLA

Date: 2114(21 7:30 ·

Time:



El Australia Suite 6.01, 55 Miller Street PYRMONT, NSW, 2009

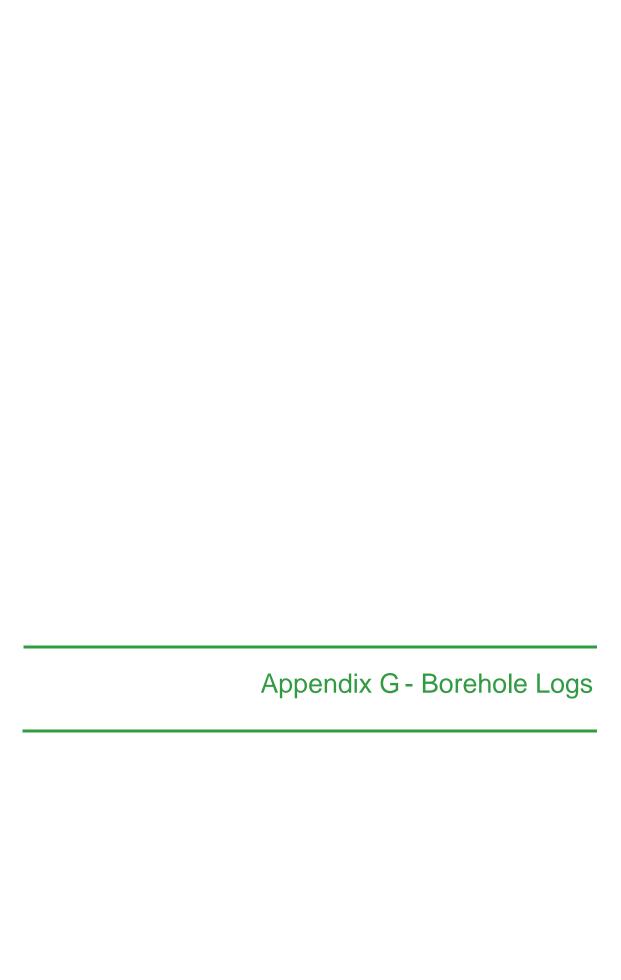
ABN 42 909 129 957
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

• • • • • • • • • • • • • • • • • • • •
Instrument: Mini RAE 3000
Serial Number: 592-906667 - El PID02 □ OR 592-901345 - El PID03 □
Instrument Conditions: Cool
Calibration gas species: Isobutylene.
Calibration gas concentration: <u>loo</u> ppm
Gas bottle number: 6t = 935570 Cyli93
This PID has been calibrated to Isobutylene gas with the span concentration displayed as
ppm at <u>loo</u> ppm span setting (allowable range +/-10ppm from span setting).
The PID is initially zero calibrated in fresh air.
Remaining gas in bottle:psi (if reading is <250 psi, notify Equipment Manager to arrange new
gas bottle order)
The above detector was calibrated in accordance with manufacturer's specifications.

Signed: 1.Su

Date: 22/4(2)





BOREHOLE: 82-BH101M

Project Detailed Site Investigation

Position

Client

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet

Refer to Figure A.2a

Date Started 20/4/21 Date Completed 20/4/21

1 OF 1

Job No. E25077.E02 Holdmark NSW Pty Ltd Contractor HartGeo Pty Ltd Ute mounted drill rig

Logged AS

Drill Rig Checked Al Inclination

ME HOD METER O MET	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	Field Material Desc		CONSISTENCY DENSITY	PIEZO ID Static Wat	OMETER D	DETAILS
	DEPTH RL	SAMPLE OR FIELD TEST	COVERED	PHIC	SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	URE	STENCY IY	PIEZO ID Static Wat 82-BH101M	OMETER [<u>er Level</u>	DETAILS
-			R	GRA	nscs		MOIST	CONSI	82-BH101ML HB- HB-		
GWNE - GWNE	1.00	82-BH101M_0.4-0.5 PID=0.4ppm 82-BH101M_0.9-1.0 PID = 0.3 ppm			-	FILL: Sandy CLAY; medium plasticity, orange brown, with fine to coarse grained sand, no odour. FILL: Silty Clayey SAND; fine to coarse grained, dark brown, no odour.	D - M	_			- Gatic Cover - Cuttings - uPVC 50 mm Casing - Bentonite
- - - 2		82-BH101M_1.4-1.5 PID = 0.2 ppm			-	SANDSTONE; extremely weathered, orange, no odour.	D				- uPVC 50 mm Screen - Sand
						Hole Terminated at 2.00 mBGL; Refusal on sandstone bedrock					
7— - - - 8—	-										
9	-										



BOREHOLE: 82-BH102M

Project Detailed Site Investigation

Position

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park

Refer to Figure A.2a

20/4/21 Date Started Date Completed 20/4/21

1 OF 1

Job No. E25077.E02 Contractor HartGeo Pty Ltd

Logged AS Ute mounted drill rig

Client Holdmark NSW Pty Ltd Drill Rig Checked Al Inclination -90° Drilling Sampling **Field Material Description** PIEZOMETER DETAILS JSCS SYMBOL MOISTURE CONDITION CONSISTENCY DENSITY ID Static Water Leve RECOVERED 82-BH102M 82-BH102M 700 82-BH102M SAMPLE OR GRAPHIC LOG SOIL/ROCK MATERIAL DESCRIPTION WATER DEPTH (metres) FIELD TEST DEPTH RL Gatic Cover FILL: Gravelly SAND; fine to coarse grained, dark brown, with fine to coarse grained and sub-angular to angular gravels, with a trace of brick pieces ,no odour. 82-BH102M_0.4-0.5 QD1/QT1 0.60 FILL: Gravelly SAND; fine to coarse grained, with fine to coarse grained and sub-angular to angular gravels, no odour. PID = 0.3 ppm82-BH102M_0.9-1.0 PID = 0.7 ppmD Cuttings From 1.3m, dark brown. 82-BH102M_1.4-1.5 uPVC 50 mm PID = 1.4 ppmCasing 82-BH102M_1.9-2.0 PID = 0.6 ppm FILL: Gravelly Sandy CLAY; medium plasticity, dark brown / brown, with fine to coarse grained sand, with fine to coarse 82-BH102M_2.4-2.5 PID = 0.4 ppmgrained and sub-angular to angular gravels, no odour AD/T 82-BH102M_2.9-3.0 3 PID = 0.4 ppm D -M Bentonite 82-BH102M_3.5-3.6 3.60 PID = 0.6 ppmFILL: Silty CLAY; medium plasticity, red / orange mottled brown, with a trace of fine to coarse grained sandstone gravels, no odour 82-BH102M_3.9-4.0 uPVC 50 mm PID = 0.6 ppm Screen 4.20 SANDSTONE; extremely weathered, orange, no odour. 82-BH102M 4.4-4.5 PID = 1.1 ppm Sand 82-BH102M 4.9-5.0 D 5 PID = 2.3 ppm82-BH102M 5.4-5.5 PID = 1 ppm 5.80 Hole Terminated at 5.80 mBGL: 6 9



Project Detailed Site Investigation

82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 Location

Position Refer to Figure A.2b Date Started 20/4/21 Date Completed 20/4/21

Job No. E25077.E02

Contractor HartGeo Pty Ltd

Logged AS

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Checked Al Inclination

		Dri	lling		Sampling				Field Material Desci	iptic	n	
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0 —	0.15 0.40 0.80 1.10 1.30	30-BH101_0.2-0.3 PID = 0.6 ppm 30-BH101_0.5-0.6 PID = 0.4 ppm 30-BH101_0.9-1.0 PID = 0.3 ppm 30-BH101_1.4-1.5 PID = 0.7 ppm			-	CONCRETE: 150mm thickness. FILL: Sitty SAND; fine to coarse grained, red, no odour. FILL: Gravelly SAND; fine to coarse grained, light orange, with fine to coarse grained and sub-angular to angular gravels, no odour. FILL: Crushed SANDSTONE; white / grey, with white / grey sandy silt, no odour. VOID: 200mm thickness. FILL; SANDSTONE; extremely weathered, orange, no odour.	- D - M	1	CONCRETE HARDSTAND FILL - FILL
AD/T	-	GWNE	3— - - - -	2.30	30-BH101_2.9-3.0 PID = 0.4 ppm			-	FILL: Gravelly SAND; fine to coarse grained, light orange, with fine to coarse grained and sub-angular to angular gravels, no odour.	D	-	
			4 —	4.50	30-BH101_4.4-4.5 PID = 1 ppm 30-BH101_5.4-5.5 PID = 0.8 ppm			CI	FILL: Sandy Silty Gravelly CLAY; medium plasticity, dark brown / black mottled orange, with fine to coarse grained sand, with fine to coarse grained and sub-rounded gravels, with organic odour. Sandy Silty CLAY: medium plasticity, dark brown, with fine to coarse grained sand, with organic odour. Silty CLAY; low plasticity, stiff, grey mottled orange, no odour.	· w		RESIDUAL SOIL
			6 —	7.00			x		Hole Terminated at 7.00 mBGL; Target depth reached.	D - M	1	
			8 — 9 — -									
			- - - 10 —		This borehole	e lo	g shou	ıld be	e read in conjunction with EI Australia's accompanying star	ndaro	d note	es.



BOREHOLE: 30-BH102M

Project Detailed Site Investigation

Holdmark NSW Pty Ltd

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1

Position Refer to Figure A.2b

Client

Date Started 20/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd Date Completed 20/4/21

Drill Rig Ute mounted drill rig Logged AS Inclination -90° Checked AI

		Dril	ling		Sampling		1	Field Material Desc		PIEZOMETER DETAILS
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION CONSISTENCY DENSITY	D Static Water Level 30-BH102M
			0 —	0.40	30-BH102M_0.2-0.3 PID = 0.2 ppm 30-BH102M_0.5-0.6 PID = 0.1 ppm 30-BH102M_1.2-1.3 PID = 0.2 ppm		-	CONCRETE: 100mm thickness. FILL: SAND; fine to coarse grained, yellow, no odour. FILL: Gravelly CLAY; medium plasticity, red / brown, with fine grained and sub-angular to angular gravels, no odour.	D - M	Gatic Cover Cuttings Bentonite uPVC 50 mm Casing
AD/T	-	GWNE	2 — 3 —	1.60	30-BH102M_2.0-2.1 PID = 1 ppm 30-BH102M_2.4-2.5 PID = 0.4 ppm		-	FILL: Gravelly SAND; fine to coarse grained, brown, with fine grained gravels, with a trace of brick fragments, no odour.	D - W	uPVC 50 mm Screen Sand
			4 — - - - -	3.80 4.55	30-BH102M_5.5-3.6 PID = 1.1 ppm 30-BH102M_4.0-4.1 PID = 0.5 ppm		-	FILL: Crushed SANDSTONE; orange, with fine to coarse grained sand, with fine to coarse and sub-rounded gravels, no odour. Hole Terminated at 4.55 mBGL; Refusal on sandstone.	D - M	
			5 —							
			7 — 8 —							
			9 — - - - -							



Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 20/4/21

Position Refer to Figure A.2b Date Started Date Completed 20/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd

Logged AS Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Checked Al Inclination -90°

		Dri	lling		Sampling				Field Material Desci	riptic	n		_
METHOD	PENETRATION RESISTANCE	_	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL			CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	_
			0-	0.15	30-BH103_0.3-0.4		P. L.	-	CONCRETE: 150mm thickness. FILL: SAND; fine to coarse grained, yellow, no odour. FILL: Gravelly CLAY; medium plasticity, black mottled brown with	- D		CONCRETE HARDSTAND FILL	_
ì	-	GWNE	- - 1—	1.10	PID = 0.2 ppm 30-BH103_0.9-1.0 PID = 0.2 ppm			CI	FILL: Gravelly CLAY; medium plasticity, black mottled brown, with fine grained and sub-angular to angular gravels, no odour. Silty CLAY; medium plasticity, light orange mottled red, stiff, no odour.	D - N	-	RESIDUAL SOIL	_
			-	1.50	30-BH103_1.3-1.4 PID = 0.1 ppm		<u>x</u>		Hole Terminated at 1.50 mBGL; Target depth reached.				
			2 — - -										
			3—										
			-										
			4										
			- - 5—										
			-										
			6										
			-										
			7										
			-										
			8 -										
			9 —										
			- - -										
			- 10 —										



Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 20/4/21

Position Refer to Figure A.2b E25077.E02

Date Started Date Completed 20/4/21

Job No.

Client

HartGeo Pty Ltd Logged AS Ute mounted drill rig

Contractor Holdmark NSW Pty Ltd Drill Rig Checked Al Inclination -90°

		D-::	line		Camplina				Field Metarial Dage	rinti -	<u></u>	
	z	_	ling		Sampling	Π		7	Field Material Desc			
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0-	0.60	30-BH104_0.4-0.5			-	FILL: Gravelly SAND; fine to coarse grained, dark grey / brown and grey white, no odour.			FILL
			1— - -		PID = 0.3 ppm 30-BH104_0.9-1.0 PID = 0.2 ppm			-	FILL: Gravelly SAND; fine to coarse grained, brown, with fine grained gravels, with a trace of brick fragments, no odour.	D		
5		GWNE	2— 2—	2.60	30-BH104_2.0-2.1 PID = 0.3 ppm			-	FILL: Gravelly Sandy CLAY; medium plasticity, brown, with fine to coarse grained sand, with fine grained gravels, no odour.	D - N	1	
AD/T	-	GW	3-	3.30	30-BH104_2.7-2.8 PID = 0.2 ppm			-	FILL: Gravelly SAND; fine to coarse grained, brown, with fine grained gravels, with a trace of brick fragments, no odour.	D		
			4		30-BH104_3.4-3.5 PID = 0.2 ppm			-	FILL: Silty SAND; fine to coarse grained, orange red, with a trace of siltstone, no odour.	D - M	1	
			5	4.40 5.10	30-BH104_4.2-4.3 PID = 0.3 ppm 30-BH104_4.9-5.0 PID = 0.6 ppm				From 4.4m, brown.	D		
			-		Т Б – 0.0 урт				Hole Terminated at 5.10 mBGL; Refusal on bedrock.			
			6 — - -									
			7									
			8 									
			9 —									
			10—									



Project Detailed Site Investigation

Holdmark NSW Pty Ltd

82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 Location 20/4/21

Position Refer to Figure A.2b

Client

Date Started

Date Completed 20/4/21 Job No. E25077.E02 Contractor HartGeo Pty Ltd

> Logged AS Drill Rig Ute mounted drill rig Checked Al Inclination -90°

		Dril	lling		Sampling				Field Material Desc	rintic	n	
	z		ling		Sampling			7				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0-				\bigotimes		FILL: Gravelly SAND; fine to medium grained, dark grey / brown and grey white, with fine grained gravels, no odour.			FILL
AD/T	-	GWNE	- - -		30-BH105_0.4-0.5 PID = 0.3 ppm					D	-	
∢		Ö	1—				\otimes					
			- - -	1.30 1.70	30-BH105_1.2-1.3 PID = 0.2 ppm 30-BH105_1.4-1.5 PID = 0.1 ppm			-	FILL: Crushed SANDSTONE; orange, with fine to coarse grained sand, with fine to coarse and sub-rounded gravels, no odour.			
			2-						Hole Terminated at 1.70 mBGL; Refusal too hard, possible bedrock			
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BOREHOLE: 30-BH106M

Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 Date Started 21/4/21

Position Refer to Figure A.2b

Date Completed 21/4/21

Job No. E25077.E02

Contractor HartGeo Pty Ltd

Logged AS

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Checked Al Inclination -90°

Drilling Sampling **Field Material Description** PIEZOMETER DETAILS MOISTURE CONDITION CONSISTENCY DENSITY PENETRATION RESISTANCE USCS SYMBOL <u>ID</u> Static Water Level RECOVERED 30-BH106M SAMPLE OR GRAPHIC LOG SOIL/ROCK MATERIAL DESCRIPTION -BH106N WATER DEPTH (metres) FIELD TEST DEPTH RL Gatic Cover FILL: Gravelly SAND; fine to medium grained, dark grey / brown and grey white, with fine grained gravels, with a trace of metal pieces, no odour. 30-BH106M_0.3-0.4 Cuttings PID = 0.4 ppm30-BH106M_1.1-1.2 From 1.1m, with a trace of crushed sandstone. 1.30 PID = 1 ppm FILL: Crushed SANDSTONE; orange, with fine to coarse grained sand, with fine to coarse and sub-rounded gravels, no odour. uPVC 50 mm 1.60 Casing FILL: Gravelly SAND; fine to medium grained, dark grey / brown and grey white, with fine grained gravels, with a trace of metal fragments, no odour. 30-BH106M_1.9-2.0 PID = 0.3 ppm30-BH106M_2.7-2.8 PID = 0.2 ppm uPVC 50 mm 3 Ą 3.40 Sand 30-BH106M_3.4-3.5 FILL: Sandy Gravelly CLAY; medium plasticity, dark grey, with fine to coarse grained and sub-angular gravels, no odour. PID = 0.5 ppm W 30-BH106M_4.4-4.5 PID = 0.1 ppm 5 W 30-BH106M 5.4-5.5 PID = 0.1 ppm Cuttings -100 6 30-BH106M_6.3-6.4 Hole Terminated at 6.40 mBGL; Refusal on sandy gravelly clay. PID = 0.2 ppm8 9



Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 21/4/21 Date Started

Contractor

Position Refer to Figure A.2b E25077.E02

Job No.

Date Completed 21/4/21 HartGeo Pty Ltd Logged AS

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig _an°

		Dri	lling		Sampling				Field Material Desc	riptio	n	
METHOD	PENETRATION RESISTANCE	1	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL			CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0 — - -	0.40	30-BH107_0.3-0.4 PID = 0.4 ppm			-	FILL: Gravelly SAND; fine to coarse grained, dark grey and white mottled orange, with fine to coarse grained and sub-angular to angular gravels, no odour. FILL: Sandy Gravelly CLAY; medium plasticity, brown, with fine to coarse grained and sub-angular	D	-	FILL
			1 — -	1.10	30-BH107_0.9-1.0 PID = 0.3 ppm			-	gravels, no odour. FILL: Gravelly CLAY; medium plasticity, grey, with fine to medium grained and sub-rounded gravels, no odour.			
			- - 2-		30-BH107_1.3-1.4 PID = 0.4 ppm				g	D - M	1	
ò	-	GWNE	-	2.20	30-BH107_2.3-2.4 PID = 0.2 ppm			-	FILL: Sandy Gravelly CLAY; medium plasticity, brown, with fine to coarse grained sand, with fine to coarse grained and sub-angular gravels, with sandstone boulders, no odour. FILL: Sandy Gravelly CLAY; medium plasticity, brown, with fine to		-	
			3-	3.20	30-BH107_2.9-3.0 PID = 0.2 ppm			1	FILL: Sality Gravelry CLAT, medium plasticity, blown, with line to coarse grained and sub-angular gravels, no odour. FILL: Silty SAND; fine to coarse grained, orange red, with a trace			
			- - 4	-	30-BH107_3.8-3.9 PID = 0.2 ppm				of siltstone, no odour.	D		
			- - 5—	4.50					Hole Terminated at 4.50 mBGL; Refusal on bedrock.			
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			- - 10-	_								



Project Detailed Site Investigation

82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 Location

Position Refer to Figure A.2b

21/4/21 Date Started Date Completed 21/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd

Logged AS Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Checked Al Inclination -90°

						_						
		_	ling		Sampling	_			Field Material Desc			
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
					30-BH108_0.2-0.3 PID = 0.3 ppm 30-BH108_0.4-0.5 PID = 0.2 ppm			-	FILL: Gravelly SAND; fine to coarse grained, red/brown, with fine grained gravels, with a trace of brown clay, no odour.	D D - M	1	FILL
			1— - -	1.10	30-BH108_1.2-1.3 PID = 0.1 ppm			-	FILL: Gravelly CLAY; medium plasticity, grey, with fine to medium grained and sub-rounded gravels, no odour.	М		
AD/T	-	GWNE	2— -		30-BH108_1.8-1.9 PID = 0.4 ppm					D - M	1 -	
			3 —	3.20	30-BH108_2.7-2.8 PID = 0.2 ppm					М		
		\triangleright	-	3.70	30-BH108_3.4-3.5 PID = 0.2 ppm				SANDSTONE; extremely weathered, orange, no odour.	D		WEATHERED BEDROCK
			4			J			Hole Terminated at 3.70 mBGL; Target depth reached.			
			- 5—									
			- - -									
			6-									
			- - 7—									
			- - -									
			8 									
			- - 9—									
			- -									
			10—		This horeho	le lo	g show	ıld he	e read in conjunction with EI Australia's accompanying star	ndar	d note	28



Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1

Inclination

Position Refer to Figure A.2b

Date Started 21/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd

Date Completed 21/4/21

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

Logged AS Checked AI

		Dri	lling		Sampling				Inclination -90° Field Material Desc	rintic	n	Спескед Аі
METHOD	PENETRATION RESISTANCE	_	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL			CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0 — - - - 1 —		30-BH109_0.3-0.4 PID = 0.4 ppm 30-BH109_0.5-0.6 PID = 0.2 ppm			-	FILL: Gravelly SAND; fine to coarse grained, red/brown, with fine grained gravels, with a trace of brown clay, no odour.	D - M		FILL
	-	GWNE	2 —		30-BH109_1.5-1.6 PID = 0.1 ppm						-	
			3		30-BH109_2.6-2.7 PID = 0.1 ppm					М		
			- - 4	3.80 4.10	30-BH109_3.5-3.6 PID = 0.2 ppm 30-BH109_4.0-4.1			CI	Sandy Silty CLAY: medium plasticity, dark brown, with fine to coarse grained sand, with organic odour.	w		RESIDUAL SOIL
			- - -		PID = 0.1 ppm				Hole Terminated at 4.10 mBGL; Target depth reached.			
			5— - -									
			6 - -									
			7									
			8 -									
			9									
			10—	-								



BOREHOLE: 30-BH110M

Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 Date Started 21/4/21

Position Refer to Figure A.2b

Date Completed 21/4/21

Job No. E25077.E02

Contractor HartGeo Pty Ltd

Logged AS

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Checked Al Inclination -90°

					ı			indination -30						
			ling		Sampling		1.	Field Material Desc	ı i	1. 1	DIE70	METED	DETAILS	
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR G	GRAPHIC	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY	ID Static Wate 30-BH110M 00 14 18 18 18 18 18 18 18 18 18 18 18 18 18	≯ Level	DETAILS	
			0 —				<u> </u>	FILL: Gravelly SAND; fine to coarse grained, red, with fine grained and rounded gravels, no odour.	D				Gatic Cover	T
			_	0.30	30-BH110M_0.2-0.3 PID = 0.4 ppm	\bowtie	-	FILL: Gravelly SAND; fine to coarse grained, red/brown, with fine						
			-				8	grained gravels, with a trace of brown clay, no odour.				3		
			-	1.00	30-BH110M_0.7-0.8 PID = 0.4 ppm	\otimes			D - M	1				-
			1—				7 -	FILL: CLAY; medium plasticity, orange mottled grey, no odour.						-
			-	1.50	30-BH110M_1.4-1.5	\blacksquare								
			_		PID = 0.2 ppm	\otimes	\{\begin{array}{c} - \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	FILL: Gravelly SAND; fine to coarse grained, red/brown mottled grey, with fine grained gravels, with a trace of brown clay, no					Cuttings	
			2-				8	odour.				\$	— uPVC 50 mm	-
			-		30-BH110M_2.2-2.3	\blacksquare	\langle		М				Casing	
			_		PID = 0.1 ppm	\bowtie	\langle							
			-			\otimes	\mathbb{R}							
		\triangleright	3 —	3.00	30-BH110M_2.9-3.0 PID = 0.3 ppm	\otimes		From 3.0m, with a trace of brick fragments.	+			3		-
			_		30-BH110M_3.4-3.5	\mathbb{X}	\langle		M -					
L			-		PID = 4 ppm	\mathbb{X}	$\left\{ \right.$		W					
AD/T	-		-	4.00			8			-			- Bentonite	
			4		30-BH110M_4.1-4.2		. S	Peaty Clayey SAND; fine grained, dark grey, with sulfur odour.						-
			-		PID = 0.5 ppm	-								-
			-			1/2								-
			5 —											-
			-	5.30		<u> </u>	<i>υ</i> : .		ļ					
			_			7		From 5.3m, with a trace of shell fragments.	W					
			-			-							0 1	
			6 —			7	7/						Sand uPVC 50 mm Screen	-
			-			, <u> </u>								
			-	6.80		F								
			7 —	0.00	30-BH110M_7.0-7.1		CH	CLAY; high plasticity, grey mottled orange, with shell fragments, with sulfur odour.						-
			-		PID = 0.2 ppm	\equiv]		М					
			-	7.50		_	1	Hole Terminated at 7.50 mBGL;						+
			_					Target depth reached.						
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			-											
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			10 —											
					This borehole I	og sho	ould b	e read in conjunction with EI Australia's accompanying sta	ndard	d note	s.			



BOREHOLE: 30-BH111M

Project Detailed Site Investigation

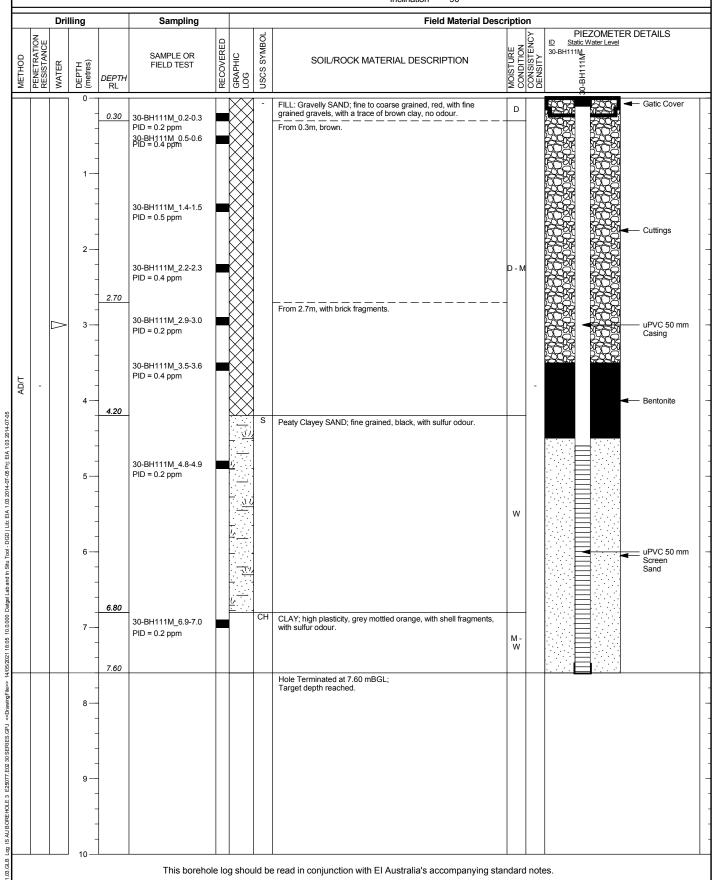
Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 Date Started 21/4/21

Position Refer to Figure A.2b

Job No. E25077.E02

Contractor HartGeo Pty Ltd Date Completed 21/4/21

Logged AS Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Checked Al Inclination -90°





Project Detailed Site Investigation

Client

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1
Position Refer to Figure A.2b Date Started 21/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd Date Completed 21/4/21

Holdmark NSW Pty Ltd Drill Rig Hand Auger Logged AS
Inclination -90° Checked AI

METHOD
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HA



Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 Date Started 21/4/21

Position Refer to Figure A.2b

Date Completed 21/4/21

Job No. E25077.E02

Client

Contractor HartGeo Pty Ltd Drill Rig Ute mounted drill rig

Logged AS

Holdmark NSW Pty Ltd Inclination

Checked Al

	Drilling		Sampling				Field Material Descri	intic	n	
1			Sampling			7				
0.20 2.58 H101_01.0.2 PID = 0.05 PID = 0.07 ppm PID = 0.07 ppm		<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBO	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENC	
S		0.20	32-BH101_0.1-0.2		XX.		FILL: SAND; fine to coarse grained, brown, with a trace of red clay, no odour.	D		
#0 = 10 T spm 1	GW - GW	1				Ci		D - M	-	RESIDUAL SUIL
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3— 4— 5— 6— 8— 9—	1—						raiget departeached.			
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5 5 1- 1- 7 1- 1- 10	-									
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· · · · · · · · · · · · · · · · · · ·	10		This borehole	e log	shou	ld be	read in conjunction with EI Australia's accompanying star	ndard	l note	es.



Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1
Position Refer to Figure A.2b Date Started 22/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd Date Completed 22/4/21

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Logged AS
Inclination -90° Checked AI

		Dri	lling		Sampling				Field Material Desc	riptic	n	
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/I	-	GWNE	0		32-BH102_0.2-0.3 PID = 0.6 ppm			-	FILL: Sandy Gravelly CLAY; low to medium plasticity, orange brown, with fine to coarse grained sand, with fine to coarse and sub-angular to angular gravels, no odour.	D - M	1	FILL
•		υ	1	0.90 1.40	32-BH102_0.9-1.0 PID = 0.6 ppm			S	Gravelly SAND (weathered sandstone); fine to coarse grained, light orange / grey, with sandstone fragments, with fine to coarse grained and sub-rounded gravels, no odour.	D		WEATHERED BEDROCK
			-				- A-		Hole Terminated at 1.40 mBGL; Target depth reached.			
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Project Detailed Site Investigation

Holdmark NSW Pty Ltd

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1

Position Refer to Figure A.2b

Client

Date Started 22/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd Date Completed 22/4/21

Drill Rig Ute mounted drill rig Logged AS Inclination -90° Checked AI

		Dril	ling		Sampling				Field Material Descr	iptic	n	
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL			CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0	0.40	32-BH103_0.3-0.4 PID = 0.9 ppm 32-BH103_0.9-1.0			-	FILL: Gravelly SAND; fine to coarse grained, brown, with fine grained and sub-angular gravels, with a trace of medium plasticity clay, no odour. FILL: Sandy Gravelly CLAY; low to medium plasticity, orange brown, with fine to coarse grained sand, with fine to coarse and sub-angular to angular gravels, no odour.	D D - M	_	FILL
			1— - -	1.50	PID = 1.2 ppm 32-BH103_1.4-1.5			CI- CH	Sandy CLAY; medium to high plasticity, dark grey, with fine grained sand, no odour.	М		RESIDUAL SOIL
			- 2—		PID = 0.6 ppm				Hole Terminated at 1.50 mBGL; Target depth reached.			
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BOREHOLE: 32-BH104M

Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1
Position Refer to Figure A.2b Date Started 22/4/21

Job No. E25077.E02 Contractor HartGeo Pty Ltd Date Completed 22/4/21

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Logged AS Inclination -90° Checked AI

	1_	_	lling		Sampling	_		_	Field Material Desc			PIEZOMETER DETAILS
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	PIEZOMETER DETAILS ID Static Water Level 32-BH104N \$ 5 # # # # # # # # # # # # # # # # # #
		Ш	0	0.70	32-BH104M_0.2-0.3 PID = 0.8 ppm			-	FILL: Silty Sandy CLAY; low to medium plasticity, brown, with fine to medium grained sand, no odour.	D - N	1	Gatic Cover Cuttings uPVC 50 mm
AD.	-	GWNE	1— 1—		32-BH104M_1.0-1.1 PID = 0.2 ppm		0	S	Gravelly SAND (weathered sandstone); fine to coarse grained, light orange / grey, with fine to coarse grained and sub-rounded gravels, no odour.	D	-	Casing Bentonite Sand uPVC 50 mm
			-	1.60			. 0 . ,		Hole Terminated at 1.60 mBGL; Refusal on sandstone bedrock.			Screen
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Project Detailed Site Investigation

82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet Location 1 OF 1 22/4/21

Position Refer to Figure A.2b Date Started Date Completed 22/4/21

Job No. E25077.E02

Contractor HartGeo Pty Ltd

					Client	Holdr	mark N	NSW	Pty Ltd Drill Rig Ute mounted Inclination -90°	drill ri	9	Logged AS Checked AI
		Dri	lling		Sampling				Field Material Des	crinti	n n	
METHOD	PENETRATION RESISTANCE	_	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION		CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	1-	1.00	32-BH105_0.2-0.3 QD2/QT2 PID = 0.3 ppm 32-BH105_0.5-0.6 PID = 0.3 ppm 32-BH105_1.2-1.3 PID = 0.1 ppm		X , , , , , , , , , , , , , , , , , , ,	CL- CI	FILL: Gravelly SAND; fine to coarse grained, brown, with fine grained and sub-angular gravels, with a trace of medium plasticity, and odour. Sitly CLAY; low to medium plasticity, grey mottled orange, no odour. Gravelly SAND (weathered sandstone); fine to coarse grained, light orange / grey, with fine to coarse grained and sub-rounded gravels, no odour.			FILL RESIDUAL SOIL WEATHERED BEDROCK
			3-						Hole Terminated at 2.00 mBGL; Refusal on bedrock sandstone.			
			5-	-								
			7-	-								
			9-									



Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1 22/4/21

Position Refer to Figure A.2b Date Started Date Completed 22/4/21

Job No. E25077.E02

Contractor HartGeo Pty Ltd

Logged AS

Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

Checked Al Inclination -90°

		Dril	ling		Sampling				Field Material Desc			
МЕТНОБ	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0 —		32-BH106_0.2-0.3 PID = 0.4 ppm			-	FILL: Sandy Gravelly CLAY; low to medium plasticity, orange brown, with fine to coarse grained sand, with fine to coarse and sub-angular to angular gravels, no odour.	D - N		FILL
AD/I	-	GWNE	1	1.20	32-BH106_0.9-1.0 PID = 1 ppm			-	FILL: Sandy CLAY: high plasticity, brown, with fine to medium		-	
			-	1.70	32-BH106_1.4-1.5 PID = 0.7 ppm			CI- CH	FILL: Sandy CLAY; high plasticity, brown, with fine to medium grained sand, with a trace of fine to coarse grained gravels, no odour. Sandy CLAY; medium to high plasticity, dark grey, with fine grained sand, no odour.	м		RESIDUAL SOIL
+			2	2.00	32-BH106_1.9-2.0 PID = 0.4 ppm			СН	grained sand, no odour. Hole Terminated at 2.00 mBGL; Target depth reached.			
			- -									
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BOREHOLE: 32-BH107M

Project Detailed Site Investigation

Location 82 Hughes Avenue, Ermington and 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Sheet 1 OF 1

Inclination

Position Refer to Figure A.2b

Date Started 22/4/21
Date Completed 22/4/21

 Job No.
 E25077.E02
 Contractor
 HartGeo Pty Ltd

 Client
 Holdmark NSW Pty Ltd
 Drill Rig
 Ute mounted drill rig

Logged AS Date: Checked AI Date:

		D.:	11:		Commilian				Inclination -90°	-141-			
	ATION	_	ling		Sampling SAMPLE OR	ERED	O	SYMBOL	Field Material Description			PIEZOMETER I ID Static Water Level 32-BH107M	DETAILS
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	FIELD TEST	RECOVERED	GRAPHIC LOG	uscs s	SOIL/ROCK MATERIAL DESCRIPTION	MOISTU	CONSISTENCY		
			0		32-BH107M_0.2-0.3 PID = 0.5 ppm			1	FILL: Gravelly SAND; fine to coarse grained, brown, with fine grained and sub-angular gravels, with a trace of medium plasticity clay, no odour.	D			Gatic CoverCuttings
Ž	-	GWNE	- 1— -	0.80	32-BH107M_1.0-1.1 PID = 0.4 ppm		XX X X	CL- CI	Silty CLAY; low to medium plasticity, grey mottled orange, no odour.	D - M	_ _ 1		 Bentonite uPVC 50 mm Casing
			2-	1.70 2.10	32-BH107M_2.0-2.1		X X	S	Gravelly SAND (crushed sandstone); fine to coarse grained, light orange / grey, with sandstone fragments, with fine to coarse grained and sub-rounded gravels, no odour.	D	_		uPVC 50 mm Screen Sand
			-		PID = 0.6 ppm				Hole Terminated at 2.10 mBGL; Refusal on sandstone bedrock.			· · · · ·	
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Project Detailed Site Investigation

Location 82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park

Position Refer to Figure A.2b

 Job No.
 E25077.E02
 Contractor
 HartGeo Pty Ltd

 Client
 Holdmark NSW Pty Ltd
 Drill Rig
 Ute mounted drill rig

Inclination -90°

Sheet 1 OF 1 Date Started 22/4/21

Checked Al

Date Completed 22/4/21 Logged AS Date:22/4/21

Date:14/5/21

Drilling Sampling **Field Material Description** MOISTURE CONDITION CONSISTENCY DENSITY PENETRATION RESISTANCE USCS SYMBOL RECOVERED STRUCTURE AND ADDITIONAL OBSERVATIONS SAMPLE OR GRAPHIC LOG SOIL/ROCK MATERIAL DESCRIPTION WATER DEPTH (metres) FIELD TEST DEPTH RL ASPHALT ASPHALT: 40mm thickness 0.20 CONCRETE HARDSTAND GWNE CONCRETE: 160mm thickness D AD/T FILL 0.40 112-BH101_0.3-0.4 FILL: Sandy GRAVEL; fine to coarse grained, dark brown, with fine to coarse grained sand, with ballast gravels, no odour. RESIDUAL CIS PID = 0.2 ppm 0.70 Sandy Silty CLAY: medium plasticity, fine grained sand, red grey mottled orange, no odour. PID = 0.3 ppm 112-BH101_0.6-0.7 Borehole Terminated at 0.70 mBGL; Target depth reached. 3 5 6 8 9



Project Detailed Site Investigation

Position

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

Inclination -90°

1 OF 1 Date Started 22/4/21

Checked AI

Date Completed 22/4/21 Logged AS Date:22/4/21

Date:14/5/21

		Dril	iiig		Sampling	_			Field Material Desc				
	PENETRATION	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
T			0 —	0.20			P. B.	-	ASPHALT: 40mm thickness.	-		ASPHALT CONCRETE HARRSTAND	
		щ	-					<u> -</u>	CONCRETE: 160mm thickness.	Б	1	CONCRETE HARDSTAND FILL	
	-	GWNE		0.50	112-BH102_0.4-0.5 PID = 0.4 ppm		XX	CIS	FILL: Silty SAND; fine to medium grained, grey, with a trace of low to medium plasticity clay, no odour.	\vdash	-	RESIDUAL	
			_	0.90	7 15 – 0.4 ррш		×		Sandy Silty CLAY: medium plasticity, red grey mottled orange, fine grained sand, no odour.	D - N	1		
Ť			1 —		PID = 0.2 ppm	Г	×		Borehole Terminated at 0.90 mBGL;				
			-		112-BH102_0.7-0.8				Target depth reached.				
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Project Detailed Site Investigation

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Position Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

1 OF 1 21/4/21 Date Started

Date Completed 21/4/21 Logged AS Date:22/4/21

					Client	Hold			Inclination -90°			Checked AI Date:14/5	4/2 5/2
		Dri	lling		Sampling				Field Material Desc				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
AD/T	-	GWNE	0	0.40 0.60	112-BH103_0.2-0.3 PID = 0.8 ppm			 	ASPHALT: 40mm thickness. FILL: Gravelly SAND; fine to coarse grained, brown, with fine to coarse grained, and sub-angular gravels, no odour. Sandy Sitty CLAY: medium plasticity, red grey mottled orange, with fine grained sand, no odour.	D - M	-	ASPHALT FILL RESIDUAL	
			- 1—		PID = 0.8 ppm 112-BH103_0.5-0.6				with fine grained sand, no odour. Borehole Terminated at 0.60 mBGL; Target depth reached.	1			
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Project Detailed Site Investigation

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Position Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

1 OF 1 Date Started 21/4/21

Date Completed 21/4/21 Logged AS Date:22/4/21

									Inclination -90°			Checked AI Date:14/5	5/2
		Dri	lling		Sampling				Field Material Des				
UOLI I IIM	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
AD/ I	-	GWNE	0 -	0.50	112-BH104_0.2-0.3 PID = 1.2 ppm			- - CI	ASPHALT: 40mm thickness. FILL: Gravelly SAND; fine to coarse grained, brown, with fine to coarse grained, sub-angular gravels, no odour. Sandy Silty CLAY; medium plasticity, red gray mottled grange.	D -	-	ASPHALT FILL RESIDUAL	
_			1-	0.80	PID = 0.7 ppm 112-BH104_0.7-0.8		·:>		Sandy Silty CLAY: medium plasticity, red grey mottled orange, fine grained sand, no odour. Borehole Terminated at 0.80 mBGL; Target depth reached.	D - N	1		
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Project Detailed Site Investigation

Position

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

Inclination

1 OF 1 Date Started 21/4/21

Date Completed 21/4/21 Logged AS Date:22/4/21

Checked AI Date:14/5/21 -90°

		_	ling		Sampling				Field Material Desc				
MELHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS	
			0 —					<u> </u>	ASPHALT: 40mm thickness.	<u>-</u>	1	CONCRETE HARDSTAND	
į	-	GWNE		0.40	112-BH105_0.2-0.3 PID = 0.9 ppm		\boxtimes	_	FILL: Gravelly SAND; fine to coarse grained, brown, with fine to coarse grained, sub-angular gravels, no odour.	D	_		
		0	_	0.70	- 0.9 ррпп			CIS	Sandy Silty CLAY; medium plasticity, red grey mottled orange, fine grained sand, no odour.	D - N	1	RESIDUAL	
			_	0.70	PID = 0.6 ppm 112-BH105_0.6-0.7				Borehole Terminated at 0.70 mBGL:				
			1 —		112-BH105_0.6-0.7				Target depth reached.				
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BOREHOLE: 112-BH106M

Project Detailed Site Investigation

Position

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

1 OF 1 21/4/21 Date Started

Date Completed 21/4/21 Logged AS Date:22/4/21

					Client F	ioiai	TIGHT I	1000	Pty Ltd Drill Rig Ute mounted d Inclination -90°	19		Logged AS Checked AI	Date:14/5/2
		Dri	lling		Sampling				Field Material Desc	riptio	n		
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	PIEZOMETER D Static Water Level 112-BH106M	ETAILS
AD/T		GWNE	0		112-BH106M_0.2-0.3 PID = 1.1 ppm			-	FILL: Gravelly SAND; fine to coarse grained, brown, with fine to coarse grained, sub-angular gravels, no odour.	D	_		Gatic Cover Cuttings uPVC 50 mm Casing Bentonite
7		ß	- - - 2-	1.30	PID = 1 ppm 112-BH106M_0.9-1.0 PID = 1.1 ppm 112-BH106M_1.4-1.5			-	FILL: Gravelly SAND; fine to coarse grained, dark brown, with fine to coarse grained, sub-angular gravels, with a trace of clay, no odour. SANDSTONE; extremely weathered, yellow/orange, no odour.	D - M			Sand uPVC 50 mm
			- - - 3-	2.20	PID = 0.7 ppm 112-BH106M_1.9-2.0	_			Borehole Terminated at 2.20 mBGL; Refusal on sandstone bedrock.				Screen
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			10—		This borehol	le lo	g shou	ld be	e read in conjunction with EI Australia's accompanying star	ndard	l note	es.	



Project Detailed Site Investigation

Location 82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park

Position Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

> Inclination -90°

1 OF 1 Date Started 21/4/21

Date Completed 21/4/21 Logged AS Date:21/4/21

Checked Al Date:15/4/21 Drilling Sampling **Field Material Description** MOISTURE CONDITION CONSISTENCY DENSITY PENETRATION RESISTANCE USCS SYMBOL RECOVERED STRUCTURE AND ADDITIONAL OBSERVATIONS SAMPLE OR GRAPHIC LOG SOIL/ROCK MATERIAL DESCRIPTION WATER DEPTH (metres) FIELD TEST DEPTH RL ASPHALT ASPHALT: 40mm thickness. FILL FILL: Gravelly SAND; fine to coarse grained, brown, with fine to coarse grained and sub-angular gravels, no odour. 112-BH107_0.2-0.3 GWNE PID = 0.9 ppm AD/T 0.70 RESIDUAL Sandy Silty CLAY; medium plasticity, orange mottled grey, with fine grained sand, no odour. 1.00 PID = 0.6 ppm 112-BH107_0.9-1.0 Borehole Terminated at 1.00 mBGL; Target depth reached. 3 5 8 9



Project Detailed Site Investigation

Position

Location 82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park

Refer to Figure A.2b

 Job No.
 E25077.E02
 Contractor
 HartGeo Pty Ltd

 Client
 Holdmark NSW Pty Ltd
 Drill Rig
 Ute mounted drill rig

Sheet 1 OF 1
Date Started 21/4/21

Date Completed 21/4/21 Logged AS Date:22/4/21

						Olient 1				Inclination -90°		,	Checked Al Date:14/5/21
F			Dril	lling		Sampling				Field Material Desc			
METHOD	DENETDATION	RESISTANCE	WATER	DEPTH (metres)	<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T		-	GWNE	0 - -	0.30	112-BH108_0.2-0.3 PID = 0.8 ppm			-	ASPHALT: 40mm thickness. FILL: Sandy GRAVEL; fine to coarse grained, light grey, with fine to coarse grained sand, no odour. FILL: Gravelly CLAY; medium to low plasticity, brown mottled grey, with fine to coarse grained and sub-angular to angular gravels, no odour.	D - M	-	ASPHALT FILL
				1—	1.20	PID = 0.7 ppm 112-BH108_0.7-0.8		×	CI	Sandy Silty CLAY; medium plasticity, brown mottled orange, with fine grained sand, no odour.			RESIDUAL
4/09/2021 17/07 10.0.000 Dagei Lab and in Stu Tool - DGD Lib.: EIA 1.03 2014-07/45 Prj: EIA 1.03 2014-07/45				2 — 2 — 3 — 3 — 5 — 5 — 6 — 7 — -	1.20	PID = 0.4 ppm 112-BH108_1.1-1.2				Borehole Terminated at 1.20 mBGL; Target depth reached.			
Log IS AU BOREHOLE 3 E28077 E02 112 SERIES GPJ <<- DrawingFile>> 14/09/2021 17:07 10.0,000 Dargel Lab				8 — 9 —									



Project Detailed Site Investigation

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Position Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

21/4/21 Date Started

Date Completed 21/4/21 Logged AS Date:22/4/21

1 OF 1

					Client	пош	mark i	ISW	Pty Ltd Drill Rig Ute mounted d Inclination -90°	riii rig		Logged AS Date:22/4/2 Checked AI Date:14/5/2
		D	illing		Sampling				Field Material Desc	riptic	n	
METHOD	PENETRATION	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	1-	0.40	112-BH109_0.3-0.4 PID = 0.8 ppm PID = 0.7 ppm 112-BH109_0.7-0.8			-	ASPHALT: 40mm thickness. FILL: Sandy GRAVEL; fine to coarse grained, light grey, with fine to coarse grained sand, no odour. FILL: Gravelly CLAY; medium to low plasticity, brown mottled grey, with fine to coarse grained and sub-angular to angular gravels, no odour.	D - M	-	ASPHALT
			2-	-	PID = 0.4 ppm 112-BH109_1.9-2.0			CI	Sandy Silty CLAY: medium plasticity, grey mottled orange, fine grained sand, no odour. Borehole Terminated at 2.00 mBGL; Target depth reached.			RESIDUAL
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			6-	- - - - -								
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			10-		This boreh	ole lo	g shou	ıld be	e read in conjunction with EI Australia's accompanying star	ndaro	d note	es.



BOREHOLE: 112-BH110M

Project Detailed Site Investigation

Location 82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park

Position Refer to Figure A.2b

 Job No.
 E25077.E02
 Contractor
 HartGeo Pty Ltd

 Client
 Holdmark NSW Pty Ltd
 Drill Rig
 Ute mounted drill rig

Inclination -90

Sheet 1 OF 1
Date Started 21/4/21

Date Completed 21/4/21
Logged AS Date:22/4/21
Checked AI Date:14/5/21

0 0.20 112-BH110M_0.2-0.3 PID = 0.7 ppm PID										Inclination -90°			Checked AI	Date:14/5/2
20			Dri	lling		Sampling				Field Material Desc				
12.8H110M_0.2.0.3	METHOD	PENETRATION RESISTANCE	WATER		<i>DEPTH</i> RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE	CONSISTENCY DENSITY	PIEZOMETER D Static Water Level 112-BH110M	ETAILS
1				0 -	0.20			P. L	-	CONCRETE: 200mm thickness.	-			- Gatic Cover
12-Bi+110M_07-08 PID = 0.6 ppm 1.2Bi+110M_07-08 PID = 0.6 ppm 1.4Bi-110M_07-08 PID = 0.7 ppm 2.7Bi-110M_07-08 PID = 0.7 ppm 2.7Bi-10M_07-08 PID = 0.7Bi-10M_07-08 PID = 0.7B				-				X	-	FILL: Gravelly SAND; fine to coarse grained, brown, with fine to	w	1		Oddings
1	AD/T	_	W.E	-	0.50			$\frac{XX}{X}$	CI		D - N	1 -		uPVC 50 mm Casing Bentonite
1.40 12-BH110M_13-14 PID = 0.7 ppm Borehole Terminated at 1.40 mBGL; Reduced on sundature bedroot.	∢		9	1—	0.90				SM					
Sorehole Terminated at 1.40 mBGL; Refusal on sandstone bedrock. 8				-	1.40	112-BH110M 1 3-1 4		×			D			uPVC 50 mm
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Project Detailed Site Investigation

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Position Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig

1 OF 1 Date Started 21/4/21

Date Completed 21/4/21 Logged AS Date:22/4/21

ı						Client F	ioiu	IIIaik i	1311	Pty Ltd Drill Rig Ute mounted of Inclination -90°	JI III 116	ł	Checked AI Date:14/5/2
F						0							Onooned 7th Bate. 1 170/2
METHOD	METHOD	PENETRATION RESISTANCE	_	DEPTH (metres)	<i>DEPTH</i> RL	Sampling SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	Field Material Desc SOIL/ROCK MATERIAL DESCRIPTION		CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	AD/I	-	GWNE	0	0.30	112-BH111_0.2-0.3 PID = 0.3 ppm PID = 0.4 ppm 112-BH111_0.6-0.7			-	FILL: Gravelly SAND; fine to coarse grained, brown, with fine to coarse grained, and sub-angular gravels, no odour. FILL: Gravelly CLAY; medium to low plasticity, brown mottled grey, with fine to coarse grained and sub-angular to angular gravels, no odour. SANDSTONE: extremely weathered, yellow/orange, no odour.	D - N		FILL WEATHERED BEDROCK
				2— 3— 3— 4— 5— 6— 7— 8— 9—		PID = 0.3 ppm 112-BH111_1.1.0-1.2				Borehole Terminated at 1.20 mBGL; Target depth reached.			



BOREHOLE: 112-BH112M

Date Started

Project Detailed Site Investigation

82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park Location

Position Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Date Completed 22/4/21 Logged AS Date:22/4/21

1 OF 1

22/4/21

SOIL/ROCK MATERIAL DESCRIPTION Second Secon	12-BH112M
TOPSOIL; Gravelly SAND; fine to coarse, dark brown, fine sub-rounded to angular gravels, with some silt, no odour. 112-BH112M_0.4-0.5 PID = 0.4 ppm PID = 0.2 ppm 112-BH112M_0.9-1.0 SANDSTONE: extremely weathered, yellow/orange, no odour. Borehole Terminated at 1.50 mBGL; Refusal on sandstone bedrock.	12-BH112M
TOPSOIL: Gravelly SAND; fine to coarse, dark brown, fine sub-rounded to angular gravels, with some silt, no odour. 112-BH112M_0.4-0.5 PID = 0.4 ppm 112-BH112M_0.9-1.0 SANDSTONE: extremely weathered, yellow/orange, no odour. D Borehole Terminated at 1.50 mBGL; Refusal on sandstone bedrock.	Gatic Cover
1 - PID = 0.2 ppm 112-BH112M_0.9-1.0	Gatic Cover Cuttings UPVC 50 mm Casing Bentonite
	Sand UPVC 50 mm Screen
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This borehole log should be read in conjunction with EI Australia's accompanying standard notes.



BOREHOLE: 112-BH113M

Project Detailed Site Investigation

Location 82 Hughes Avenue Ermington, 30 & 32 Waratah Street & 112 Wharf Road, Melrose Park

Position Refer to Figure A.2b

Job No. E25077.E02 Contractor HartGeo Pty Ltd Client Holdmark NSW Pty Ltd Drill Rig Ute mounted drill rig Date Started 22/4/21 Date Completed 22/4/21 Logged AS Date:22/4/21

1 OF 1

Tille Till	Field Material Description CK MATERIAL DESCRIPTION AND; fine to coarse, darkbrown, fine lar gravels, with some silt, no odour. The property of the property of the large of
112-BH113M_0.2-0.3 PID = 0.2 ppm - SANDSTONE: extrem 1 - 112-BH113M_0.8-0.9 PID = 0.3 ppm - SHALE: extremely we 112-BH113M_3.1-3.2 PID = 0.4 ppm	AND; fine to coarse, darkbrown, fine lar gravels, with some silt, no odour. AND; weathered, yellow/orange, no odour. D - Sand Wall 12-BH113M Castic Water Level 112-BH113M — Gatic Cover lar gravels, with some silt, no odour. — Cuttings uPVC 50 mm Casing — Bentonite
112-BH113M_0.2-0.3 PID = 0.2 ppm 112-BH113M_0.8-0.9 PID = 0.3 ppm - SHALE: extremely we large a sub-rounded to angular sub-rounded to a	lar gravels, with some silt, no odour. Cuttings uPVC 50 mm Casing Bentonite D - Sand uPVC 50 mm
112-BH113M_0.8-0.9 PID = 0.3 ppm 3	D - Sand
3 3.00 112-BH113M_3.1-3.2 PID = 0.4 ppm 4 4 4.30 Borehole Terminated Refusal on bedrock s	Sand uPVC 50 mm
3 3.00	uPVC 50 mm
4.30 Borehole Terminated Refusal on bedrock s	
	d at 4.30 mBGL;
6	
7	
8—	
9—	

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.



Daily Inspection Card - Remediation & Validation

Form OP 005a (Rev 1)

Signed by: A.Sc.



Suite 6.01, 55 Miller Street, Pyrmont NSW Ph: (02) 9516 0722 Fax: (02) 9518 5088, service@eiaustralia.com.au

Project Number:	E25077	Engineer Name:	4>	Page:	_(of(_	
Date:	20/4/21	Time ON Site:	7:00			
Travel Time:	30 mms	Time OFF Site:	5:45			
Site Address/Locat	ion: Meloos	- Park				
Climatic Conditions	Surry					
Completed Works:	82-BHCE	O(M - no.	mater or	he dolled	10 Z.O n	elesul
	82-BH16	zy - de	uclassed			
			'			
				instell we	Il sec Galor	
		DZM - de	velapsed			
	30-BH1					
	30-BH1					
	30-1341	03				
Comments / Issues	/ Conclusions / Fur	ther Testina Required	/ Actions to be Und	ertaken / Timing of Acti	ons:	
3	SO-BHIOLA	1: Sample	s talen	but well a	neble to be i	notalech
	hde heeps	colapsin	2)			,
9	030n 7:	30-1:29	bade	for the	3:00-4:00	
100	sanda (D. 82 B	Mensil	20-02		
7733 5	compres (@: 87-B	1101M-C	9-70		
		30-01	11011012			
-						

Daily Inspection Card - Remediation & Validation

Form OP 005a (Rev 1)

Signed by:



Suite 6.01, 55 Miller Street, Pyrmont NSW Ph: (02) 9516 0722 Fax: (02) 9518 5088, service@eiaustralia.com.au

Project Number:	E26077	Engineer Name:	13	Page:	of
Date:	reluela	Time ON Site:	7:01		
Travel Time:	30 mm	Time OFF Site:	5:45		
Site Address/Locat	Melos	e Parh			A
Climatic Condition	s: Semy				
Completed Works:	30 -	1341.007			
	30.	-BHOGA ,	8,91, LOM,	llM	
		-BHOI			
			3	•	•
	112-	- BH 63,4,5	7,8,9,6M,1	OM	
	/	All wells 3	8-BHEM, 11	y & 30-C	SHGM, was closedaged
		follows			
Comments / Issues	/ Conclusions / Furt	her Testing Required	/ Actions to be Underta	ken / Timing of Actions	5:
	14.				
	- 112-13411	DI, 102- M	red cours	e corny	syster alem gorly orang with Jason & dwestogate and Cot
	- Lilley ho.	shad a	Core alon	supressor.	syster- alem gony
	of some	2 yesterd	eroy Surpeel	+ conside co	orong with Sason &
	Andrew	I could a	e fle prot	dena - will	divestigate and lat
	us tri	~/	0		0
ritering	112-BHGM	COM in	uskelled at	22 6 1.4	~
1000	20 Dive				
Ass:		6M-6.3-6.4			
		M_7.0-7.	1		
	30 - IZHIII	M-6.9-7.	. 0		

					7

Daily Inspection Card - Remediation & Validation

Form OP 005a (Rev 1)

Signed by:



Suite 6.01, 55 Miller Street, Pyrmont NSW Ph: (02) 9516 0722 Fax: (02) 9518 5088, service@eiaustralia.com.au

Project Number:	E28077	Engineer Name:	AS	Page:	<u>/</u> of <u>(</u>
Date:	22/2/21	Time ON Site:	7:00		* * * * * * * * * * * * * * * * * * * *
Travel Time:	Somms	Time OFF Site:			
Site Address/Locati	ion: Meliose	- Parh			
Climatic Conditions					
Completed Works:	Borehold	es:			
	(12-Bt	1111, 112M, 11.	3M, 101,102		
	35-BH1	02,103,1041	N, 105, 106, 10	714	
Q	2/00120	32-BH105_6	0.2-0.3		
21	04/254 @	112-BHOZ.	_0.7-0.8 - for ments	when in new	tral due to not enough
Q	RI PORBI -P	reported by rue	vingrihade ou	er Auger a	Aler 112-134101.
Date: Time ON Site: 7:00 Travel Time: Somms Time OFF Site: 3:30 Site Address/Location: Melrose Post					
-	Juson	Vere call	ed to core	at 112	-BHIOL & 102.
-	All wells	day when	developing		
_	Unerte to	o get AS	> semple a	it wells	close to manyrous
c	le to	shellow	refusal.		0
			•		
	1				



T.M.

Approved:

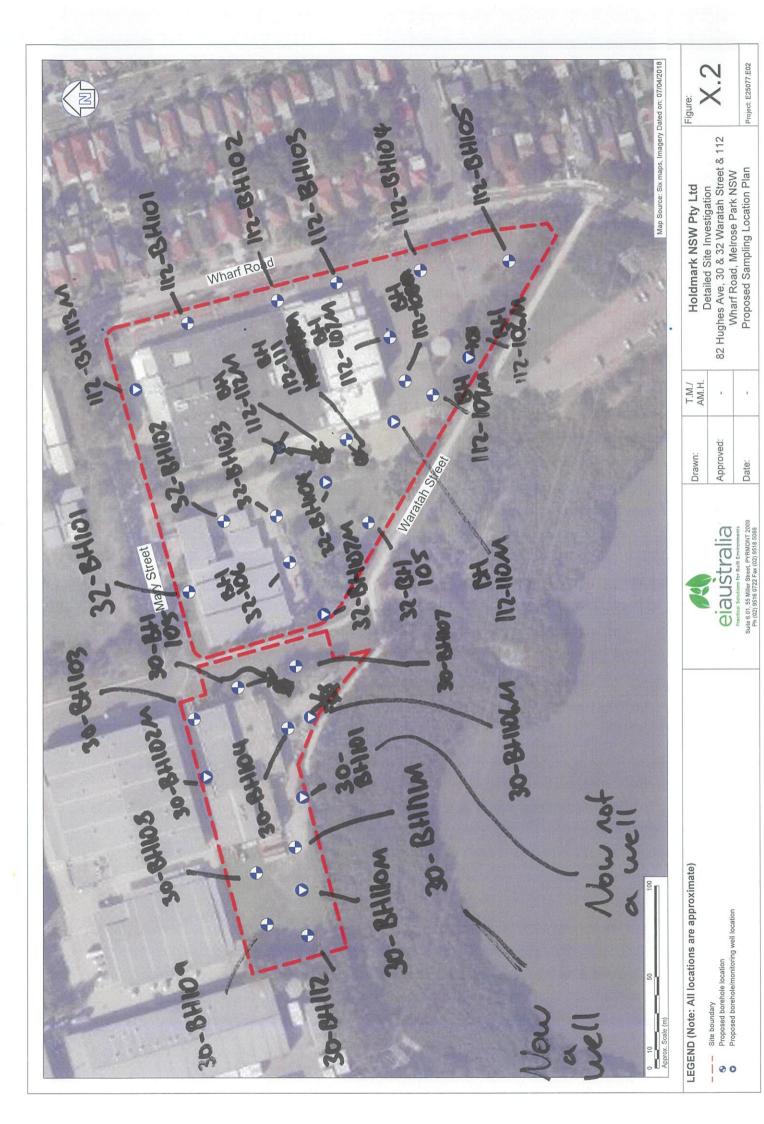
Drawn:

elauStralia Practica Soutons for Bull Environments Suite 60: 55 Miller Street, PYRRONT 2009 Ph (02) 9518 0722 Fex (02) 9518 5088

Holdmark NSW Pty Ltd
Detailed Site Investigation
82 Hughes Ave, 30 & 32 Waratah Street & 112
Wharf Road, Melrose Park NSW
Proposed Sampling Location Plan

Project: E25077.E02

Site boundary
 Proposed monitoring well location





El Australia Suite 6.01, 55 Miller Street PYRMONT, NSW, 2009

ABN 42 909 129 957
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

	Instrument: Mini RAE 3000
	Serial Number: 592-906667 - El PID02 OR 592-901345 - El PID03
	Instrument Conditions:
	Calibration gas species: Isobutylene.
	Calibration gas concentration:teo_ppm
	Gas bottle number: 61:985570 Col:93
	This PID has been calibrated to Isobutylene gas with the span concentration displayed as
	ppm at ppm span setting (allowable range +/-10ppm from span setting).
	The PID is initially zero calibrated in fresh air.
	Remaining gas in bottle:psi (if reading is <250 psi, notify Equipment Manager to arrange new
	gas bottle order)
_	

The above detector was calibrated in accordance with manufacturer's specifications.

Signed: ASC

Date: 224(21

Time: 10:30 ---



El Australia Suite 6.01, 55 Miller Street PYRMONT, NSW, 2009

ABN 42 909 129 957 E service@eiaustralia.com.au W www.eiaustralia.com.au T 02 9516 0722

CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

Instrument: Mini RAE 3000
Serial Number: 592-906667 - El PID02 ☑ OR 592-901345 - El PID03 □
Instrument Conditions: Cook
Calibration gas species: Isobutylene.
Calibration gas concentration: LPD ppm
Gas bottle number: lot 935570 cyl. 93
This PID has been calibrated to Isobutylene gas with the span concentration displayed as
ppm at <u>Loo</u> ppm span setting (allowable range +/-10ppm from span setting).
The PID is initially zero calibrated in fresh air.
Remaining gas in bottle:psi (if reading is <250 psi, notify Equipment Manager to arrange new
gas bottle order)
The above detector was calibrated in accordance with manufacturer's specifications. Signed: ASLA

Date: 2114(21 7:30 ·

Time:



El Australia Suite 6.01, 55 Miller Street PYRMONT, NSW, 2009

ABN 42 909 129 957
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

• • • • • • • • • • • • • • • • • • • •
Instrument: Mini RAE 3000
Serial Number: 592-906667 - El PID02 □ OR 592-901345 - El PID03 □
Instrument Conditions: Cool
Calibration gas species: Isobutylene.
Calibration gas concentration: <u>loo</u> ppm
Gas bottle number: 6t = 935570 Cyli93
This PID has been calibrated to Isobutylene gas with the span concentration displayed as
ppm at <u>loo</u> ppm span setting (allowable range +/-10ppm from span setting).
The PID is initially zero calibrated in fresh air.
Remaining gas in bottle:psi (if reading is <250 psi, notify Equipment Manager to arrange new
gas bottle order)
The above detector was calibrated in accordance with manufacturer's specifications.

Signed: 1.Su

Date: 22/4(2)



PYRMONT, NSW, 2009

ABN 42 909 129 957
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

Fresh air calibration completed?			
Span gas calibration completed?			
Primary Samples:	Max PID Reading (ppm):	QA/QC Samples:	Sample Description, etc. (Type of strata, colour, consistency, particle size, particle shape, grading, secondary materials, moisture, odour)
82-101M2/			
82-102MV			
30-101M			
102MV			
103			
104			
105 /			
106M			
107 /	13		
108			
1090			
HOM			
IIIM			
112			
32 -101	10	0/	
-102/	15	welle	
-103//		CLE CCS	
-104M			
-105		,	
-106 /			
-1074			
112-101			
-107			
-107			
-104 /			
-105 /			
-106M			
-107			
-108 V			
-10a V			
-llom			
-111			
-112M			
-113M			
- A			

Signed by:



BH NO: 22-13H101/1

Sheet:

B 0	re	nc	gle	Log				JOD 140). E2	50//.E02
Princ	cipal:			des i	Ave			Started Finishe Logge Check	ed: 20 d: 4-	14/2/ 3
Equip Diam	pmen	t:U	20	1 Milk	13-1	test	Slope: -90° Bearing:	RL Su		1,24
		forma	ation		mate	rial inform		Datum		
method	water	samples	sanfple method / QC	depth (m)	PID reading	material code	material description soil type, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)	well construction
						17	Fill Sendy CLAY: F-C sand, med Fild clay fight bream oranges brown	D in	<i>\</i>	121
		711		0.4	9.4		1311 3011 3111 31	n		
			- Vert	0.9	DJ		Fill Oil at Class & Contain			
		777		1.4	0.2	FZ	Fill: 5:14 Cleyer SANP, F-C sand. Med pl day, dash brown	M	N	
		100		1.7					,	
	0			2.0		N	Sandstorn Roch (crudical Sy Auger) Sandy Croud: F-C sout, F-C sagrands	P		1/1//
	Siell			2.0			Refusa @ 20 m - rock			Screen 1.5-2,0
	7					Fill	sandstone			
							,			
						1				
							7			
	auge roller wash claw	or blad	e de bit	odoui HC S Su		nydrocarbo solvent sulfur	weathering N Wextremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh Classification symbols and so description based on unified classification system. Refer accompanying description sh for further information.			consistency VS very soft S soft F firm St stiff VSt very siff VSt very stiff density index VL very loose L loose D dense VD very dens VD very dens
	diatul V-bit TC-b			odoui w m s	i	index weak moderate strong	water Level at date / time moisture grain vf wf m wf wf	very fine mediu coars	ım	H hard Fb friable material boundaries known boundary
	wireli	ne cor	e	vs		very strong	complete outflow partial outflow Wp plastic limit c Wl liquid limit	coars		— — probable boundary possible boundary



BH NO: 82-BH 102M

Sheet:

					Log			service@eiaustralia.com.au	Job No	o: E2	5077.E	.02		
	Prin	cipal:		Ane U.		4			Finishe Logge	ed: '2 & d:	14/21			
	Loc	ation:	27	- (-lu	erill 1	The		Slope: -90°	Check		, ,			-
	Dia	neter	11: (4	te c	74.4			Slope: -90° Bearing:	RL Su Datum					
			nforma	ation		mate	rial inform		Datain					
	method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil type, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)	well	constru	ction	tile
		>	Š	% Q	Ď	Δ.	_		_	0		TEVER		
			ET.		0.4	0.3	F3	Fill: Grovely SAND: F-C sand, F-C growls A-St with frace brick pieces, dash brown	The same	N		PALT	R-	
	_	_	1	4	0.6-	-	-	EVI To all CAMOS FOR	-			-	_	-
1		НЭ	ta		0.9	0.1	F-4	Fill: Grenelly CAND: F-C Soud, F-C growls A-SA orangey brown	24	N				
		x			1.3								-	-
	4.4	bottem	77		1.4	1.4	F4	change: dark born	0	~		-		
		ate	777		19	26			ļ					
		,	ZU		23	0.0						-		-
		3	- January -		24		F5	हता :	D					
		beserved	11		2.5	0.4	1	Growelly sardy CLAY: F-C sord, F-C smalls A-SA, Mach Pl claus	PIN	N		-		
		و			29	- F		A-C greeds A-SA, Mad PI clay dash 600m/1600m	-		1	1	1	2.7
			1/2		3.0-	0.4				_	//		/	-be
		3	_		DACA						//		/	
		seep			3.5	0.6					1//		1/	
r	-	i h	M		3.6	0.0	FG	Fill: Silly Clan, med Pl.	.0	-	-		1.1.	3.9
+	14	4	111		39	0.6	16	red anye notted brown with	12	N	,	H	14	3.8
+	1	3			4.2			trave sinels the Gres F-C				H	/	San
e		\			1 0		玩	ind Sill Clar For End	17	1	1			
A	*	٠.	14		4.5	1.1		and Picker destriction						
th			_		1 64			Webral: suddine crowd in Auger)			- 1			-
)			111		50	2.3		Seven arabel: F-C Back with	-				()-	
								F-25 Monded Crowls. Occyc						
			111		5.4	1.0							· -	-
-ca -		_	1		55					i		-	,]
, ,					23.					1	!	-1		5-5
					-			Rohand @ S. Son - Sendstone		/		-		
								bedroek	/			2	ceer	3.8.
AD RR W			r screv r drill* /tricone bore or blace	e	odour HC S Su	5	nydrocarbo solvent sulfur	weathering XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh Classification symbols and so description based on unified classification system. Refer accompanying description of for further information.			S soft F firm St stiff	soft	L loos MD med D den	/ loose se dium dense
CB HA D V		hand diatu V-bit	auger be		w -		index weak noderate	water	very f	-	H hard Fb friab	i ole		
T NMLC			C core		m s	5	strong	inflow W wet m complete outflow Wp plastic limit c	mediu		material b		known boun	
NQ, HQ, *bit show			ine cor		VS	1	ery strong	partial outflow WI liquid limit			?_		probable bou possible bou	
-000	27 31		-1	_	baile	din	tild			5	erved			,



BH NO: 30-BHLOLM

Sheet:

Princi Proje Locat	cipal: ect: tion:	Ha	t tr i	teld-	norh		Slope: -90°	Started Finishe Logge Check RL Su	d: A ed:	olulu 3		
Diam			tion		mete	rial inform	Bearing:	Datum	1			-
ariiii	ng ir	forma			1.0	rial inform	material description	sistency		well construction	on	
method	water	samples	sample method /	depth (m)	PID reading	material code	soil type, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)			
				21-			conerelle				_	-
		u		0.5-	0.6	£7	Silf Sand: F-C sand, Apol	12	N			-
		_		0.5	-	#10	Øn.	M			_	
		111		6.6	0.4	F10	Grovely SAND: F-C send, A-SA	10	N			
				0.3-		ASA	Substant while/gres	10	_	-		
		1		1.0	0.3	FB	Enchad by Auger 7	17	~			
		-		1.3			white saces SICT F sone,					
		U,		1.5	0.7	ALK	Void					-
		_		2.3-	-,_	MR	Some as M	D	N			-
				29		FID	Sand GRAVEC: F-C sand with	2	11			-
1	a Les	11		3.0	04		Send S CRAVEC: F-C sand with F-C sub could sand for grenty (Mot carefuel by August)					
	1			4.0				-				
I				14 4	1.0	FB	with wet souly silly CLAY. is	12	154			
		6	-	T.O		F(1	Sanly Wily growthy CCAY.		Y	swe	1/00-	
	é	1		3.4	0-8	NZ	El grand St. F-C sad med			3000		
				ربر			orang throughout	+,	· -	Od	our	
	ř					(9.	Joseph Server - Margove soil with train	1000	genic	8-18		
						N3	VASILY CLAY: New LOW PI - SHIPP	2	N	8		
							grey nother orange					
							N2 inable to get cleer somple)				
	-4	1		7.0	27							
	auge	r screv	* /	odour HC S		nydrocarbo solvent	HW highly weathered classification system Peter	i				y loos
r	roller. wash	tricone	u	Su		sulfur	MW moderately weathered accompanying description s SW slightly weathered 7 00 for further information.			F firm M St stiff D	MD med den	dium o
ſ	claw hand diatu	auger	le bif	220	strength	index	water moisture grai	n size		H hard	/D very	y den
- \	V-bit TC-b	,	10)	w m	,	weak moderate	level at date / time D dry vf M moist f W wet m	very f fine mediu	ŀ	Fb friable material boundaries		
	wireli	core ne cor	е	s vs		strong very strong		© coars		pro	wn bound bable bou sible bou	unda



AS AD RR W CB HA D V

Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au

BH No: 30-BHOZM

Sheet:

Pro Loc Equ	ncipal: oject: cation: uipme		te			- 3	Slope: -90°	Logge Check RL Su	d: A ed: rface:	dules LS	
	meter	nforma	tion		mate	rial inform	Bearing:	Datum	1:		
method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil type, particle characteristics or fines plasticity,	moisture + density/consistency	Odour (Y/N)	well construction	
- W	W	sa	Sal	-0.1-	ā		colour, secondary and minor components SANO: F-C Sand, yellow		8	galir	
	8	7		0.3-	0:2	fi2		0	~		9. *
		11		0.6	0.1	F13	red PI, F Sh. A gravely, red	n.	L		1
		11,		1.2-	0.2						*
		77		20	130°C	F14	Fill: Crowly SAND, F-C good sent with the grands with frues briefs from	17	N		13
		711		2.4	2000	FI4	and dignors, was	W	N		-
	-			2.7							
		77.		3.5	1.1	F14	Table 1	M	N	+	
		77		3.8	0.5	F1	Fill: Sandstone (cousted by	12	N		The lease of the l
				4.1-			Subject F-C Sout with F-C subrounded grants orange	M		(1
			_	4.53			Reclived @ 4.55m				ų
							Sindstone				
	rolle was	er screv er drill* r/tricone hbore or blace	9	odour HC S Su		nydrocarbo solvent sulfur	weathering XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FFR fresh Classification symbols and s description based on unified classification system. Refer accompanying description si for further information.			consistency VS very soft VL very lot S soft L loose F firm MD mediu St stiff D dense VSt very stiff VD very of	oose ım de
	hand diati V-bi	l auger ibe t		odour w m		index weak moderate	water level at date / time	very fine		H hard Fb friable material boundaries	.0110
PQ n by s	wire	oit .C core line cor e.g. Al	е	s vs		strong very strong	inflow W wet m complete outflow Wp plastic limit c will liquid limit	coars		known bounda hourdanes known bounda probable boundanes	dary



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au

BH No: 30-BH103

Sheet:

Pr Pr Lo	ient: incipal: oject: ocation: quipme						Slope: -90°	Started Finishe Logged Checker RL Sur	ed:	July ->
Di	ameter	:					Bearing:	Datum:		
dr	illing i	nforma			mate	rial inform		ζ		
method	water	samples	sample method /	depth (m)	PID reading	material code	material description soil type, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)	well construction
		41		0.3	02	FIZ		'D	N	
				0.9	0.2	FIS	Color. tombled willed from	Din	N	
		111	_	1.3	0.1	N4	Silb Clay: Stiff, Med Pi. Red Stylonorenge wolled red	D	N	
				62			EOH@I.S. TOR			
			,							
od	auger screw* auger drill* Sroller/tricone washbore claw or blade bit hand auger diatube Odour stre		strength		HW highly weathered MW moderately weathered SW slightly weathered FR fresh water Water HW highly weathered classification system. Refr accompanying description for further information. moisture D dry Vf	rain size	ne	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable density index VL very loose L loose MD medium d D dense VD very dens		
Q, PQ		oit .C core line cor	re	w m s vs	1	weak moderate strong very strong	level at date / time	fine mediu	m	material boundaries known boundary probable boundary possible boundary possible boundary



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au BH NO: 30-BH104

Sheet:

	Pro Loc Equ	ncipal: ject: ation:	nt: U	te	- 1			Slope: -90° Bearing:		d: A ed: rface:	24/21
	_		forma	ition		mate	rial inform		Datain		
	method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil tyge, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)	well construction
					-		FIS	Grovely SAND: F-Csandy F grovels SA-black/brown and greyentile	0	1	
			tu		0.4	0.3	4				
			U		0.9	02	File		17	N	
				_	1.7	07	F16	FIG mixed with redeley	0 17	N	
			_		2.6			with fine grands, trace brish pieces med pl clay.			
			U		2.7	02	F14	36	D	N	
			701		3.7	0.2	F17 Possil Alden	Filt: and by fager into Kilty SAND: IFE sand with frue felt stones. oranger red (Possibly be rock)	2	11	
			14		4.2	0.3					
			TI		4.9	0.6		tolor chage: brown	9	N	
					5.1.			COTICS. In abusal on tedesch			
method AS AD RR W CB HA		roller wash claw hand diatu	auger screw* HC hydrocarbon auger drill* S solvent roller/tricone Su sulfur washbore claw or blade bit hand auger diatube odour strength index V-bit W weak		solvent sulfur index	HW highly weathered MW moderately weathered SW slightly weathered FR fresh water HW highly weathered Classification system. Refer accompanying description sh for further information. moisture D dry grain D dry frequency for the following street accompanying description sh for further information.	eets size very f	ine	consistency VS very soft S soft F firm VSt very stiff VSt very stiff H hard Fb friable density index VL very loose L loose MD medium dense D dense VD very dense		
V T NMLC NQ, HQ, *bit show		TC-b NML wirel	it C core ine cor	e	m s vs	!	moderate strong very strong	inflow W wet m	fine media coars		material boundaries known boundary probable boundary possible boundary



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au BH No: 30-BHLOS

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	method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil typę, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)	well construction
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Q, P		wireli		e	w m s vs		weak moderate strong very strong	level at date / tim inflow complete outflow partial outflow level at date / tim M moist W wet Wp plastic limit WI liquid limit	fine mediu coarse	m	material boundaries



BH NO: \$ 30-BH 1005 M

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	method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil type, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)	well construction
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F9	e A		711		1.1	1.0	1515	Will frace For	12	N	00 00 00
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LB	5		1/		63	0.2		EOI-1@6.4. Refuel on Cordy			Bore Hole 6
				_				EOI-1 @ 6.4 Returned on Condy Country clay.			pulta in install
hod	auger screw* auger drill* roller/fricone washbore claw or blade bit hand auger diatube		HC S Su	r strength		HW highly weathered MW moderately weathered SW slightly weathered FR fresh moisture grain D dry vf	size very	fine	consistency VS very soft S soft F firm VSt very stiff H hard Fb friable density index VL very loose L loose MD medium der D dense VD very dense VD very dense		
	V-bit w weak level at TC-bit m moderate inflow				m s		moderate strong	inflow W wet m complete outflow Wp plastic limit c	fine medi coars		material boundaries known boundary probable boundary possible boundary



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od	auger drill* S solvent roller/tricone Su sulfur washbore claw or blade bit hand auger diatube odour strength index			strength	sulfur	HW highly weathered MW moderately weathered SW slightly weathered FR fresh water classification system. Refer accompanying description sl for further information. moisture grain p. dry yf		ine	Consistency	
Q, PQ	V-bi TC-l NML wire	ube odour strength index it w weak					level at date / time inflow complete outflow partial outflow M moist f m W wet m Wp plastic limit c WI liquid limit	fine media coars	ım	material boundaries



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au BH No: 30-BH108

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od		auge roller wash claw hand diatul	or blac auger be	e de bit	HC S Su	strength		HW highly weathered MW moderately weathered SW slightly weathered FR fresh water HW highly weathered classification system. Refer accompanying description of for further information. moisture grain D dry yf		ine	consistency VS very soft S soft F firm MD mediun St stiff D dense VSt very stiff H hard Fb friable density index VL very loc VL very de
C HQ, PQ hown b	j	wireli	it C core ne cor	е	w m s vs	r	weak moderate strong very strong	level at date / time inflow complete outflow partial outflow We wet Wp plastic limit Wl liquid limit	fine media coars	um	material boundaries



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BH No: 30-BH109

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d	rolle was clay	er screi er drill* ir/tricon hbore or blad	e de bit	odour HC S Su		hydrocarbo solvent sulfur	HW highly weathered classification system. Refer accompanying description s for further information.	ı		consistency VS very soft S soft L loose F firm MD medium de St stiff D dense VSt very stiff H hard density index VL very loose D dense VD very dense
Q, PQ wn by :	diat V-b TC- NMI wire	hand auger diatube V-bit TC-bit NMLC core wireline core uffix e.g. ADV odour strength index w weak m moderate s strong very strong very strong				weak moderate strong	water Level at date / time D dry M moist f m c c	very f fine mediu coars	ım	Fb friable material boundaries known boundary probable boundary possible boundary



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au BH NO: 20-1814 110M

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	method	water	samples	sample method / QC	depth (m)	PID reading	material code		sç	pil type, particle ch colour, seconda		r fines pla			moisture + density/consistency	Odour (Y/N)		ren const	ruction			
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method AS AD			er screv	v*	odoui HC S		hydrocarbo solvent	on		ring xtremely weatherd ighly weathered		descript classific	cation symbol tion based on cation system.	unified Refer			S	stency very soft soft	VL L	ity index very loos loose	se	
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HA D		diatu		T.	odoui	r strength	index weak	- 1	water	level at date / t	ime	moistui D	dry	grain vf	very f	fine		hard friable				
V T NMLC		V-bit			m s		moderate strong		<u></u>	inflow		M W	moist wet	f m	fine mediu		materi	al bounda		ooundary		
NQ, HQ		wire	line co	re	vs		very strong			complete outflow partial outflow	W	Wp WI	plastic limit liquid limit	С	coars	e e		?	probabl	e bounda e boundar	iry	



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au BH No: 30 - RH11111

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_C HQ, PQ shown by	/ 7 4 8	V-bit TC-bit NMLC co wireline c	ore	w m s vs		weak moderate strong very strong	level at date / time inflow complete outflow partial outflow	fine media coars	um	material boundaries	ary



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au HNO: BH 112

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bodtan		water	ethod /	depth (m)	PID reading	material code	material description soil type, particle characteristics or fincolour, secondary and minor com	es plasticity, ponents	moisture + density/consistency	Odour (Y/N)	well construction	1
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39												
thod	auger drill* S solvent roller/tricone Su sulfur washbore claw or blade bit hand auger diatube odour strength index		sulfur	XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh water MW extremely weathered ac formal fresh m D	assification symbols escription based on assification system. ecompanying descri r further information oisture dry	unified Refer ption sheets . grain size vf very fi	ne	consistency VS very soft S soft F firm MI St stiff VSt very stiff H hard Fb friable	loose medium de dense			
MLC), HQ, PQ t shown by	T N w	-bit C-bit IMLC co vireline c fix e.g.	ore	w m s vs		weak moderate strong very strong	level at date / time inflow complete outflow partial outflow	moist wet p plastic limit	f fine m mediu c coarse	m	prob	n boundary able boundary ible boundary



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BH NO: 32-BH 1001

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d	auger screw* HC hydrocarbon auger drill* S solvent roller/tricone washbore claw or blade bit hand auger diatube odour strength index		HW highly weathered MW moderately weathered SW slightly weathered FR fresh water	Classification symbol description based on classification system. accompanying descri for further information moisture D dry	unified Refer ption sheets	fine	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable density index VL very loose L loose D dense VD very dense VD very dense				
Q, PQ	V-bit TC-t NML wirel	t oit .C core line cor	e odour strength index w weak m moderate				level at date / time inflow complete outflow partial outflow	M moist W wet Wp plastic limit WI liquid limit	f fine m medi c coan	um	material boundaries



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BH No: 32-BHWZ

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	auger screw* HC auger drill* S roller/tricone washbore claw or blade bit hand auger				hydrocarbo solvent sulfur	HW highly weathered MW moderately weathered SW slightly weathered FR fresh classification system. Refer accompanying description she for further information.	eets		consistency VS very soft S soft L loose F firm MD mediun St stiff D dense VSt very stiff H hard			
PQ	diatube V-bit TC-bit NMLC core wireline co suffix e.g. A	re	odou w m s vs		index weak moderate strong very strong	water level at date / time inflow complete outflow partial outflow water D dry M moist W wet m Wp plastic limit WI liquid limit c	very f fine medit coars	ım	material boundaries movernity has been been been been been been been bee			



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BH No: 32-BH103

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method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil type, particle characteristics or fir colour, secondary and minor com	es plasticity,	moisture + density/consistency	Odour (Y/N)	well constru	ction
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	auger screw* auger drill* S roller/tricone washbore claw or blade bit hand auger diatube odour strengt					nydrocarbon solvent sulfur index	XW extremely weatherd downward water downward do	lassification symbol escription based on assification system. ccompanying description further information noisture	unified Refer ption sheets n. grain size	fine	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable	density index VL very lo L loose MD mediu D dense VD very de
PQ n by s	V-bit TC-b NML wirel	it C core ine co	re	odour strength index w weak m moderate s strong vs very strong				l moist	vf very f fine m med c coal	lium	material boundari	es known boundar probable bound possible bound



Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009 Ph: (02) 9516 0722 Fax: (02) 9516 0744 service@eiaustralia.com.au

BH No: 32-BH 104M

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method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil type, particle characteristics of colour, secondary and minor	or fines_plasticity,		moisture + density/consistency	Odour (Y/N)		struction	
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					r index	hudrot	weathering	Classification symbols				consistency VS very sof	density i	ndex
	auger drill* S solvent roller/tricone Su sulfur washbore claw or blade bit hand auger diatube V-bit w weak TC-bit Su sulfur Su sulfur Odour strength index w weak m moderate					sulfur	n XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh water	description based on classification system. accompanying descri for further information	Refer ption shee	sheets		S soft F firm St stiff VSt very stif H hard	L loo MD me D dei	
					w weak				f m	very f fine mediu	ım	Fb friable material boun	ndan.	
PQ	wirel	C core ine core e.g. A	e	S VS		strong very strong	complete outflow	Wp plastic limit WI liquid limit	С	coars	e	known boun probable bou		



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BH NO: 32-BM105

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thod	auger screw* auger drill* roller/tricone washbore claw or blade bit hand auger			HC S Su	strength		HW highly weathered MW moderately weathered SW slightly weathered FR fresh water classification system. Refer accompanying description s for further information.	1	ine	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable	D dens	loose e ium dens
LC HQ, PQ	V-bit w TC-bit m NMLC core s					weak moderate strong very strong	level at date / time inflow complete outflow partial outflow D dry M moist W wet Wp plastic limit WI liquid limit		ım e	material boundaries		



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	auger screw* auger drill* roller/tricone washbore claw or blade bit hand auger diatube		HC S Su odou	r strength		HW highly weathered classification accompanying for further info further info water Water classification accompanying for further info	ased on u system. F g descript	nified Refer	ne	consistency VS very soft S soft F firm St stiff VS very stiff H hard Fb friable density inc VL very L loose MD medi D dens VD very	
PQ n by s	washbore claw or blade bit hand auger diatube V-bit TC-bit NMLC core			w m s vs		weak moderate strong very strong	level at date / time M mois inflow W wet complete outflow Wp plast		f fine m medium c coarse	m	material boundaries



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BH No: 32-BHLOZY

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arc w cl ha	uger o oller/tr vashb	icone ore blade uger	bit	odour HC S Su	strength		HW highly weathered MW moderately weathered SW slightly weathered FR fresh water	Classification symbol description based on classification system. accompanying descriptor further information moisture D dry	unified . Refer iption sheets	fine	VS very soft V S soft L F firm M St stiff D	D medium dense
V T N	/-bit C-bit IMLC vireline	core e core	ı	w m s vs	r	weak moderate strong very strong	level at date / time inflow complete outflow partial outflow	M moist W wet Wp plastic limit WI liquid limit	f fine m med c coar	ium	material boundaries	wn boundary pable boundary sible boundary



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BHNO: 612-BHICT

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d d	auger screw* auger drill* roller/tricone washbore claw or blade bit hand auger diatube		ger drill* S solvent ler/tricone Su sulfur lishbore liw or blade bit nd auger		solvent sulfur index	XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh water	Classification symbols description based on classification system. accompanying descriptor further information moisture D dry	unified Refer ption sheets	S F S V	firm MD medium St stiff D dense VSt very stiff VD very den	
Q, PQ own by	V-b TC- NM wire	it	re	w m s vs	1	weak moderate strong very strong	level at date / time inflow complete outflow	M moist W wet Wp plastic limit Wl liquid limit	f fine m mediur c coarse	n n	naterial boundaries known boundary probable boundary possible boundary





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BH No: 112-BH102

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d	auger screw* HC auger drill* S roller/tricone sushbore claw or blade bit hand auger			nydrocarbon solvent sulfur index	water D dry yf	heets n size	ine	consistency VS very soft S soft L loose F firm St stiff VSt very stiff H hard Fb friable density index VL very loos L loose D dense VD very dens VD very dens		
Q, PQ	V: T: N: w	atube -bit C-bit MLC cor ireline cr ix e.g.	ore	w m s vs	1	weak moderate strong very strong	level at date / time inflow complete outflow partial outflow D dry W moist f W wet m C W	very fi fine mediu coarse	m	material boundaries



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BH NO: 112-BH103

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	roller wash claw hand	r screw r drill* /tricond bore or black auger	e de bit	HC S Su	\$	nydrocarbon solvent sulfur	HW highly weathered classification system accompanying des for further informat FR fresh classification system accompanying des for further informat majeture.	on unified em. Refer scription sheets		S soft L loc F firm MD me St stiff D de VSt very stiff VD ve H hard	index ry loose edium o nse ry dens		
PQ vn by s	diatu V-bit TC-b NML wirel	be it C core ine cor	e	odour w m s vs	1	index weak moderate strong very strong	water level at date / time	vf very f f fine m mediu it c coars	ım	Fb friable material boundaries known bou probable be possible bo	oundar		



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method	water	samples	sample method / QC	depth (m)	PID, reading	material code	material description soil type, particle characteristics of colour, secondary and minor of	r fines plasticity,	moisture + density/consistency	Odour (Y/N)	well constru	uction
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	auge roller wash claw hand	auger	e de bit	HC S Su		hydrocarbon solvent sulfur	weathering XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh	Classification symbol description based on classification system. accompanying descri for further information moisture	unified Refer ption sheets		consistency VS very soft S soft F firm St stiff VSt very stiff H hard	density inde VL very lo L loose MD mediur D dense VD very de
				level at date / time inflow complete outflow	D dry M moist W wet Wp plastic limit WI liquid limit	vf very f f fine m mediu c coars	ım	material boundar	ies known boundar probable bound possible bound			



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_	ameter		ation		mate	rial informati	00	Bearing:	Datun	1:	
method		samples	sample method / QC	dep [*] th (m)	PID reading	material code	material description soil type, particle characteristics of colour, secondary and minor of the colour.	r fines glasticity,	moisture + density/consistency	Odour (Y/N)	well construction
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	roller wash	er screver drill* r/tricon nbore or blace d auger	e de bit	HC S Su odour	strength		weathering XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh water	Classification symbol description based on classification system. accompanying descri for further information moisture D dry	unified Refer ption sheets n. grain size	fine	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable WS very soft VL very loo L loose MD medium D dense VL very der
, PQ wn by	V-bit TC-b NML	it C core line cor	re	W m s vs	1	weak moderate strong very strong	level at date / time inflow complete outflow partial outflow	M moist W wet Wp plastic limit WI liquid limit	grain size vf very fine st f fine m medium c coarse H hard Fb friable material boundaries material boundaries		



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BH NO: 112-BH106M

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	rolle was claw hand	er screver drill* /triconenbore or blace	e de bit	HC S Su		hydrocarbo solvent sulfur	weathering XW extremely weatherd HW highly weathered MW moderately weathered SW slightly weathered FR fresh water Classification symbols and so description based on unified classification system. Refer accompanying description sh for further information. grain	eets		VS very soft VL S soft L F firm MI St stiff D VSt very stiff VE H hard	loose medium den dense
	diatu V-bi TC-b	oit		w m		weak moderate	Water	very fine medi		Fb friable material boundaries	
PQ	wire	C core ine cor .g. Al	e	s vs		strong very strong	complete outflow Wp plastic limit c Wl liquid limit	coars	se	— — — prob	n boundary able boundary ible boundary



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od		auge roller wash claw hand diatu	or blad auger be	e de bit	HC S Su	strength		HW highly weathered MW moderately weathered SW slightly weathered FR fresh water	Classification symbol description based on classification system. accompanying descr for further information moisture D dry	unified Refer iption sheets n. grain size vf very fine	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable density index VL very loose VL very loose L loose F firm MD medium de D dense VD very dense
Q, P		wireli		e e	m s vs	2	weak moderate strong very strong	level at date / time inflow complete outflow partial outflow	M moist W wet Wp plastic limit Wl liquid limit	f fine m medium c coarse	material boundaries



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BH No: 112 - 134108

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, PQ wn by :	V-bi TC-l NML wire		re	w m s vs		weak moderate strong very strong	level at date / time inflow complete outflow partial outflow M moist W wet Wp plastic limit WI liquid limit VI	fine mediu coarsi	ım	material boundaries



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PQ .	wirel			w m s vs	1	weak moderate strong very strong	level at date / time inflow complete outflow partial outflow W wet m m m m m m m m m	fine mediu coars	ım	material boundaries



*bit shown by suffix e.g. ADV

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BHNO: \$ 112-BH110M

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3							refusal QI. In badrows surddon inoll my or development				
	rolle was claw	er screver drill* //tricore or blad auger	e de bit	HC S Su	r strength		HW highly weathered MW moderately weathered SW slightly weathered FR fresh water classification system. Refer accompanying description she for further information. moisture grain	eets	ine	S soft L lo F firm MD m St stiff D de	index ery loose ose edium den ery dense
, PQ wn by s	claw hand diate V-bi TC-b NML wire	or blace di auger libe di bit libe libe libe libe libe libe libe libe	e			index weak moderate strong very strong	FR fresh moisture grain	very f fine medic coars	ım	VSt very stiff VD ve	indary oundary



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	rolle was clay har	er scre er drill* er/tricor shbore w or bla d auge	ne nde bit	HC S Su		hydrocarbo solvent sulfur index	HW highly weathered MW moderately weathered SW slightly weathered FR fresh water Classification system. Refer accompanying description structure for further information.		fine	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable density inde VL very loc L loose D dense VL very de VL very de VL very de
ı, PQ wn by	V-b TC- NM wire	it	ore	w m s vs		weak moderate strong very strong	level at date / time M moist f m inflow Wp plastic limit c	fine medi coars	um	material boundaries



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PQ		line co		VS		very strong	complete outflow Wp plastic limit c WI liquid limit	coars	C	— — — probable bound



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BH No: 112-BH113M

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method	water	samples	sample method / QC	depth (m)	PID reading	material code	material description soil type, particle characteristics or fines plasticity, colour, secondary and minor components	moisture + density/consistency	Odour (Y/N)	well constru	Cartie.
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	auge rolle wash claw hand		e de bit	HC S Su		hydrocarbo solvent sulfur index	HW highly weathered MW moderately weathered SW slightly weathered FR fresh water classification system. Refer accompanying descriptions for further information.	d	fine	consistency VS very soft S soft F firm St stiff VSt very stiff H hard Fb friable	density index VL very loose L loose MD medium dens D dense VD very dense
PQ	hand auger diatube V-bit TC-bit NMLC core odour strength index water water D d						level at date / time inflow complete outflow M moist W wet Wp plastic limit W liquid limit	fine media coars	um	material boundari	es known boundary probable boundary possible boundary

Daily Inspection / Work Summary Card - Remediation & Validation Form OP 005a (Rev 2)



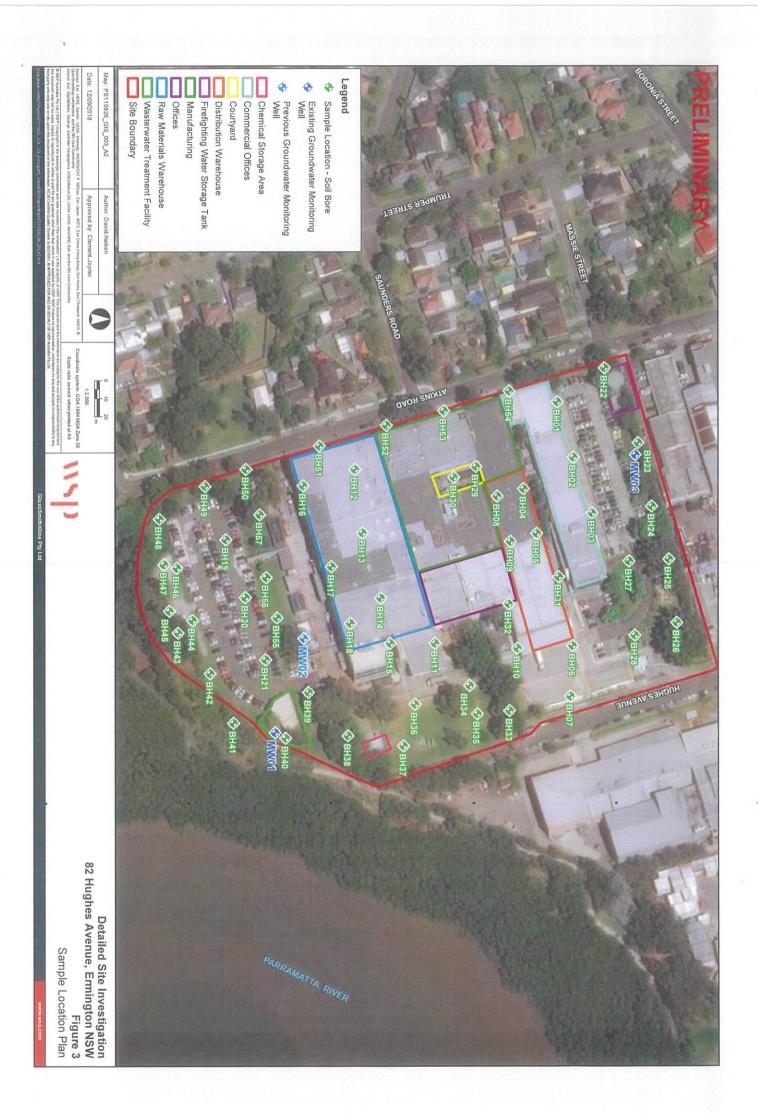
El Australia Suite 6.01, 55 Miller Street PYRMONT, NSW, 2009

ABN 42 909 129 957 E service@eiaustralia.com.au W www.eiaustralia.com.au T 02 9516 0722

rojecti	Number:	E28077	Engineer Name:	13	Page:	of	
Date:		32/4/m	Time ON Site:	7:00			
Travel Ti		45mg	Time OFF Site:	5:00			
Site Add	ress/Locati	on: Nelcose	Parh				
Climatic	Conditions	Sung/or					
Complete	ed Works:)/					
	(EME: 14	total 8 sa	noted . I PF	45 only (iille:	reter) 5 dry	
. 82	Hyche	a Ave: Pres	worsh installed	wells (WS	P) Ei-aw	-MWO3 . Ei-LW-N	nuo
	-0	Ei i	retailed : Cu	W-82-BHWZ		-MWO3, Ei-LW-A	,
30 (Warrant	al st: cu	W-30-BH102	M, aw-30	-BH106M,	aw-30-BH110N	1, au-30-BHII)
32	Warah	ul St: Che	1-BHIOHM (PFAS only s	compled note	rough wenter cube	ums)
1120	What	Rd = Good	112 - BHOGA	4, BHIOTM	BITHOM, BH	112m cw-112-BH	113M
Dr	ا : ي	12 - BH106	M,	3HILOU, BHII	zu 32-	BH107M 82	- BHIOIM
			her Testing Required I A				
					-		
7- Ein) - BHI	OGM : only	- had 0.27	in of wal	or colours.	- only enough	sande_
	0111	for	PFAS			3 -00	
							7
leur	seable	bailer	used instead	d of stamle	as skel b	sciler at 30-1	BHIIIM
due	- 60 s	ternless s	ted bailer	getting stu	el at ~?	1.0m	
Q+	HOC	: aw-1	201 & au	- OTI take	n at 30.	BHIIOM	
		lineate 1	leste & mos	le prescred	after co	-BHIIOM paplethy 30-BH	licom
	(WORI &	- CW-QRB	1			

Signed by: 150





	WATER	SAMPLI	NG FIELD	SHEET				eiaustralia
Site Address:	82 Hude					Job Num	ber: E25077	7
Client:	Holdmar					Date:	30-Apr	-21
Field Staff:	AS					Sampling	Location ID Cou	1-82-BH101-1
Well Location:	and the second second					Round No		
MEDIUM	E	Groundwa	ater 🗆 S	Surface Wa	ater	□Stormw	vater □Othe	r:
SAMPLING PO								
Well Installation	Date: 2.8	14/21		5%		Stickup (r	m): - 0.11	(+ above ground - below ground
Initial Well Dept		.0				-	iterval (mBTOC):	1-5-20
Previous Sampl		1/A		10.			SWL (mBTOC): 4	
PID READINGS								
PJD Headspace						PID Back	ground (ppm):	
PID Breathing S				•			3. varia (pp).	•
PRE PURGE	расс (рртт).							
Total Well Dept	(mbal):	97				Well Hea	d Condition: (Lo	red .
SWL (mbtoc):	1	1					olumn (m):	
PHASE SEPAR	ATERUVDE	OCAPROL	IS (DSH)			water oc	namm (m).	
		OCARBOI	45 (1511)			DSH Vier	ally Confirmed (Ba	ailer):
Depth to PSH (r PSH Thickness						T OIT VISC	lally Collillilled (Da	aller).
PURGE AND S	MALERIA DE POPE DE LA COMPANION DE LA COMPANIO			7D : : - 1 - 10	-	10 -1	T045	
Sampling Meth		□Bladde	er I	□Peristalti	C L	Submersi		Pr:
Depth of Pump						Fill Timer		
Pump Pressure		si):				Discharge	e Timer:	
Weather Condit	ions:					Cycle:		
Pump on time:						Pump off	time:	
WATER QUALI		TERS						
Probe Make and			1				st Date and Time:	
Time Volu		Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (cold	our, turbidity, odour, sheen etc.)
						ļ		
								(v)
8								
Stabilisation 3 consecutive	e readings	±0.2°C	±3%	±20mV	±10%	±0.2		
OTHER COMM	ENTS/OBSE	RVATIONS	S:					
	Dry	16	samp	65				

WATER SAMPLING FIELD SHEET eiaustralia Hughes E25077 Site Address: 82 Job Number: 30-Apr-21 Date: Client: Holdmark Sampling Location ID UW-82-BHW2-1 Field Staff: AS Well Location: Round No: □Stormwater MEDIUM ▲ Groundwater □Surface Water □Other: SAMPLING POINT INFO Stickup (m): -0.05 Well Installation Date: 20/4/2: (+ above ground - below ground) Screen Interval (mBTOC): 3.8-5.9 Initial Well Depth (mbgl): Previous Sampling Date: Previous SWL (mBTOC): PID READINGS PID Background (ppm.): PID Headspace (ppm): PID Breathing Space (ppm): PRE PURGE Well Head Condition: Total Well Depth (mbgl): Water Column (m): SWL (mbtoc): 410 4.07 PHASE SEPARATED HYDROCARBONS (PSH) PSH Visually Confirmed (Bailer): Depth to PSH (mbtoc): PSH Thickness (mm): **PURGE AND SAMPLE** Sampling Method Bladder □Peristaltic □Submersible □Other: 495 Fill Timer: 💔 Depth of Pump Inlet: Pump Pressure Regulator (psi): 20 Discharge Timer: Cycle: CPM 4 Weather Conditions: Pump off time: 10133 Pump on time: iol2 WATER QUALITY PARAMETERS Probe Make and Model: WOW 006 Bump Test Date and Time: рН Volume SWL EC Redox DO Temp Time Comments (colour, turbidity, odour, sheen etc.) (units) (mbtoc) (°C) (µS/cm) (mV) (mg/L) (L) 14.69 3121 5.66 4.27 105.8 0 medium, 10,00 10:15 0.5 4.36 19.87 3118 110.2 1.0 5-G1 10:17 0.97 19.90 3099 111.9 5.56 10:19 0.56 1.5 4.48 5.56 20.03 3084 109.4 9.48 10:21 2.0 4.56 " 5.49 4.60 105.5 0.48 10:23 25 20.06 3077 Stabilisation range: ±0.2°C ±3% ±20mV ±10% ±0.2 3 consecutive readings OTHER COMMENTS/OBSERVATIONS:

WATER SAMPLING FIELD SHEET eiaustralia 82 Hyghes E25077 Job Number: Site Address: 30-Apr-21 Holdmark Date: Client: Sampling Location ID Ec- MWOI-1 Field Staff: AS Well Location: Round No: □Stormwater □Other: MEDIUM Groundwater □Surface Water SAMPLING POINT INFO (+ above ground - below ground) Well Installation Date: Stickup (m): 70.12 Screen Interval (mBTOC): Initial Well Depth (mbgl): Previous SWL (mBTOC): Previous Sampling Date: PID READINGS PID Background (ppm): PID Headspace (ppm): PID Breathing Space (ppm): PRE PURGE Total Well Depth (mbgl): 5 いる Well Head Condition: Cross 430 1.25 SWL (mbtoc): Water Column (m): PHASE SEPARATED HYDROCARBONS (PSH) PSH Visually Confirmed (Bailer): Depth to PSH (mbtoc): PSH Thickness (mm): **PURGE AND SAMPLE** □Other: Sampling Method □Peristaltic □Submersible Fill Timer: (05 Depth of Pump Inlet: Discharge Timer: 53 Pump Pressure Regulator (psi): Weather Conditions: Cycle: CPM4 Pump on time: Pump off time: ((:27) 11:10 WATER QUALITY PARAMETERS Bump Test Date and Time: Probe Make and Model: EC Redox DO рΗ Volume SWL Temp Comments (colour, turbidity, odour, sheen etc.) Time (µS/cm) (units) (mbtoc) (°C) (mV) (mg/L) (L) 19.31 11:13 1.05 1622 50.7 0.63 6.23 0.5 19.03 6.75 11:15 1.0 1.09 35.G 1.04 18.99 6.72 1.5 1.12 646 33.0 1.12 11:17 6.64 2.0 1.15 19.02 0.93 45.6 Stabilisation range: ±3% ±20mV ±10% ±0.2 ±0.2°C 3 consecutive readings OTHER COMMENTS/OBSERVATIONS: Well not installed & Ec

WATER SAMPLING FIELD SHEET eiaustralia Hughes F25077 Site Address: \$2 Job Number: 30-Apr-21 Client: Holdmark Date: Sampling Location ID Ei-Cw-MW03-1 Field Staff: AS Well Location: Round No: \ MEDIUM ☑ Groundwater □Surface Water □Stormwater □Other: SAMPLING POINT INFO Stickup (m): ~のある (+ above ground - below ground) Well Installation Date: Initial Well Depth (mbgl): Screen Interval (mBTOC): Previous Sampling Date: Previous SWL (mBTOC): PID READINGS PID Headspace (ppm): PID Background (ppm): PID Breathing Space (ppm): PRE PURGE Well Head Condition: Total Well Depth (mbgl): 8.73 Water Column (m): 4.20~ SWL (mbtoc): 3.83 PHASE SEPARATED HYDROCARBONS (PSH) PSH Visually Confirmed (Bailer): Depth to PSH (mbtoc): PSH Thickness (mm): PURGE AND SAMPLE □Peristaltic □Submersible □Other: Sampling Method **☑**Bladder Fill Timer: 10 Depth of Pump Inlet: 7.23 Discharge Timer: Pump Pressure Regulator (psi): 20 CPn4 Cycle: Weather Conditions: الحسانية Pump off time: "1:45 Pump on time: 9:20 WATER QUALITY PARAMETERS Probe Make and Model: WOM OCK Bump Test Date and Time: рН SWL DO Volume Temp EC Redox Comments (colour, turbidity, odour, sheen etc.) Time (µS/cm) (mV) (mg/L) (units) (L) (mbtoc) (°C) 5.370012173 9-24 5.37 brown, high, ao, no 0.5 3.14 1202 6 C1368 4771 1102 0 5.10 9:26 (0) 815 19.76 4435 1111 2.59 4.93 9:28 1.5 3,75 19.90 4204 1040 4.83 20 1.08 3.30 1:30 93.6 4.77 3.34 4137 9:32 2.5 19.93 031 0.66 4.72 82.3 9:34 3.0 3-38 20.01 4061 468 9:36 74.4 0.62 3.41 3947 3.5 20.07 Stabilisation range: ±0.2°C ±3% ±20mV ±10% ±0.2 3 consecutive readings OTHER COMMENTS/OBSERVATIONS:

WATER SAMPLING FIELD SHEET eiaustralia E25077 30 Warehan Job Number: Site Address: 30-Apr-21 Holdmark Date: Client: Sampling Location ID CLU-30-BHIO2M AS Field Staff: Parceras Round No: Well Location: □Other: **MEDIUM Groundwater** □Surface Water □Stormwater SAMPLING POINT INFO 20/4/21 Stickup (m): -0.13 (+ above ground - below ground) Well Installation Date: Screen Interval (mBTOC): 1-55-4.55 Initial Well Depth (mbgl): Previous Sampling Date: Previous SWL (mBTOC): PID READINGS PID Background (ppm): PID Headspace (ppm): PID Breathing Space (ppm): PRE PURGE Well Head Condition: Cool Total Well Depth (mbgl): SWL (mbtoc): 7.37 Water Column (m): PHASE SEPARATED HYDROCARBONS (PSH) PSH Visually Confirmed (Bailer): Depth to PSH (mbtoc): PSH Thickness (mm): **PURGE AND SAMPLE** □Submersible □Other: Sampling Method ☐**B**ladder □Peristaltic Depth of Pump Inlet: 4.09 - max digh Fill Timer: (0 Discharge Timer: 5 Pump Pressure Regulator (psi): 20 CPMY Weather Conditions: Cycle: Pump on time: 4:16 Pump off time: 4:40 WATER QUALITY PARAMETERS Bump Test Date and Time: Probe Make and Model: Volume SWL Temp EC Redox DO pH Comments (colour, turbidity, odour, sheen etc.) Time (units) (mbtoc) (°C) (µS/cm) (mV) (mg/L) (L) 21.31 1628 20.6 0.50 6:31 7.87 0.5 4.13 52.9 0.37 21.04 1686 6.14 2.89 4:20 10 0.42 21.191 1644 63.9 6.10 4:27 1.5 2.94 1629 65.C 0.43 6.09 4: re 20 2.99 21.10 Stabilisation range: ±0.2°C ±3% ±20mV ±10% ±0.2 3 consecutive readings OTHER COMMENTS/OBSERVATIONS:

WATER SAMPLING FIELD SHEE	WATER	SAMP	LING	FIELD	SHEE
---------------------------	-------	------	------	--------------	------



						1		elaustralia
Site Addre	ess: 30	Wara	hay				Job Numb	per: E25077
Client:		Holdmark				- 1	Date:	30-Apr-21
Field Staf	f:	AS					Sampling	Location ID aw-30 -134106M
Well Loca	70,840	3 000					Round No	
MEDIUM		120	Groundwat	ter 🗆 S	Surface Wa	ater	□Stormw	
	IG POINT							
	allation Da	The state of the s	+ /21				Stickup (r	m): -0.13 (+ above ground - below ground)
		nbgl): 5-	-					terval (mBTOC):
	Sampling							SWL (mBTOC):
PID REAL	-	Date.					1 TCVICUS	OWE (IIIB 1 0 0).
		.m.):			-	4	DID Back	ground (ppm):
	Ispace (pp		•		200		FID Dack	ground (ppm).
	thing Spac	e (ppm):			-3%	N.	100	
PRE PUR		-11\. /: <	0		- Mary		Mall Haa	d Condition: Cooch
		nbgl): 42	95				1	7
	toc): 3		2040001	10 (DOLI)			vvater Co	llumn (m):
		ED HYDRO	CAKBON	19 (L2H)			DOLLAG	ally Confirmed (Paller)
Depth to							PSH Visu	ally Confirmed (Bailer):
PSH Thic		and the same of th					1	(att)
PURGE A	AND SAM	PLE					120	
	g Method		₽Bladde		⊐Peristalti	с 🗆	Submersil	
Depth of	Pump Inle	t: 4.63	4 mas	a dept	4		Fill Timer	
Pump Pre	essure Re	gulator (ps	i): <i>'}o</i>)T.		Discharge	e Timer:
Weather	Conditions	s: Sum					Cycle:	come
Pump on	time: 3:	41)			3	Pump off	time: 4:02
WATER	QUALITY	PARAMET	TERS					
Probe Ma	ake and M	odel:					Bump Te	st Date and Time:
Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (μS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
3:43	0.5	3.56	19.67	3135	-31.0	0.54	7.02	light from hish us, no
3:45	1.0	3.60	19.66	3124	-11.4	0.32	6.87	light bon, high, us, as
3:47	1.5	363	19.64		-6.4	0.21	6.82	- ' - '
\$ 3:60		2.65	19.61	3019	-6.2	0.24	6.82	1.1
3:51		367	19.57	300 6	-6.0	0.22	6.80	1 1 1 1
- Ore-1	-	201	i .	3000		-	6.50	
			(E) (A)	170		3		
						- COST		V
					25			
1								155 6
			-/65					
-		1	100				100	
0			4				1	to c
				SSA.				
· .								4,
1								
	oilisation r		±0.2°C	±3%	±20mV	±10%	±0.2	
3 cons	secutive re	eadings	20.2 0	25 /6		21076	20.2	
OTHER (COMMEN	TS/OBSE	RVATIONS	5:				
2								
1								per l
8					1			
SIGNATI	URE: /	14.1			1		(K)	
	1.7	JU						



	elaustralia
Site Address: 30 Wordsh	Job Number: E25077
Client: Holdmark	Date: 30-Apr-21
Field Staff: AS	Sampling Location ID Low-30-BHILOM
Well Location:	Round No: (
MEDIUM ☑Groundwater □Surface Water	□Stormwater □Other:
SAMPLING POINT INFO	
Well Installation Date: 21/4/21	Stickup (m): -0.03 (+ above ground - below ground)
Initial Well Depth (mbgl):	Screen Interval (mBTOC): 45-7.5
Previous Sampling Date:	Previous SWL (mBTOC):
PID READINGS	
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	
PRE PURGE	
Total Well Depth (mbgl): 7-47	Well Head Condition: Cool
SWL (mbtoc): \$09	Water Column (m): 4-3-8
PHASE SEPARATED HYDROCARBONS (PSH)	
Depth to PSH (mbtoc):	PSH Visually Confirmed (Bailer):
PSH Thickness (mm):	
PURGE AND SAMPLE	
	□Submersible □Other:
Depth of Pump Inlet: 60%	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer: (\$
	Cycle: Com 4
Weather Conditions:	Pump off time: Z SS
Pump on time: 2:30	Pump on time. 2003
WATER QUALITY PARAMETERS	Bump Test Date and Time:
Probe Make and Model:	
Time Volume SWL Temp EC Redox DO (mbtoc) (°C) (mV) (mg/L)	
2:33 0.5 3.73 20.27 53.97 45,1 6.32	6.29 bran, high, u, no
2:35 1.0 3.78 19.30 54.92 36.3 0.10	6.20
2:37 1.5 3.83 19.71 55.12 36.9 0.03	6.12
7:37 20 3.85 19.64 55.04 35.7 0.00	
2:41 2.5 3.87 1966 54.88 34.2 0.00	6.01
	**
	2
Stabilisation range:	
3 consecutive readings ±0.2°C ±3% ±20mV ±10%	±0.2
OTHER COMMENTS/OBSERVATIONS:	
CI 1 001 & C. 1-011 Tela	0 -
mu-cert and seri take	10 10 50
Ringete rav. at la there pung	after completely i alw-ORI
SIGNATURE:	Clu-QRB1
OTHER COMMENTS/OBSERVATIONS: (IW-QDI & W-QTI Take Ninsuk rev at la flow pung SIGNATURE:	



Site Addre	cc. 20	Waren	Lala				Job Numb	er: E25077
Client:	33. 50	Holdmark					Date:	30-Apr-21
		AS						Location IDaw-308HIIM
Field Staff:		AS						
Well Locat	ion:		<u> </u>		5 147	,	Round No	
MEDIUM			Groundwat	er US	urface Wa	ater	□Stormwa	ater DOther:
SAMPLIN								/
Well Instal			(4)				-	1): (+ above ground - below ground)
Initial Well			6					erval (mBTOC): 46-76
Previous S		Date:					Previous S	SWL (mBTOC):
PID READ	INGS							
PID Heads	space (pp	m):		•			PID Backg	ground (ppm):.
PID Breath	ning Spac	e (ppm):						
PRE PUR	15/10/2					,	4	
Total Well	Depth (m	ıbgl): 6.9	.2			F (L	Well Head	Condition:
SWL (mbt	oc): 3.7	7			100	Š.	Water Col	umn (m).3.65
PHASE SI	EPARATE	D HYDRO	CARBON	S (PSH)	la la			
Depth to F	SH (mbto	oc):			. 4	1	PSH Visua	ally Confirmed (Bailer):
PSH Thick	ness (mn	n):			a)	, A,	,	
PURGE A	ND SAME	PLE			- A	7	4	
Sampling	Method		₽Bladde	r []Peristalti	с 🗆	Submersib	le □Other:
Depth of F		: 5.50					Fill Timer:	LO
Pump Pre			1)20					Timer: 5
Weather C			750			7	Cycle: C	
Pump on t			1	1		North	ALC:	time: 5:27
WATER C			FRS				r dirip on	
Probe Mal		10.00	LICO				Bump Tes	st Date and Time:
Time	Volume	SWL (mbtoc)	Temp (°C)	EC (μS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
2	(L)	. , ,		17.67	""(4.(0.93	7.2(1 (1 45 5
3:10	1-0	3.76	20.67	22.09	-68.D	039	7.96	brown, usa, ice, ice
.3:15	1.5	3.80	20-13	22,59	-38.2			
3:14		3.84	22.12	2292	-90.5	0.05	7.06	/* //
3:16	20	3.86	20.11			3.00	_	~ /
3:18	25	3.88	20.17	23.00	9(3.7	0.00	7.06	//
							00 100	
						72 gg 1	3.00	* *
7			,	1	407			
					一根	- 1	38	-
					Al	Mr.	4	3
-					g and	and the same	1	*
						d _e		

,								3.0
								. the
	ilisation ra ecutive re		±0.2°C	±3%	±20mV	±10%	±0.2	
OTHER C	OMMEN	TS/OBSEF	RVATIONS	5:	gan		,	· • • • • • • • • • • • • • • • • • • •
Reusea	de ba	les cue	er wo	sed in	islead Hong.	of Stra Stret	~ 3	skeet bailer as
SIGNATU		Sil		The State of the S				



4"							<u> </u>	elaustralia
Site Addr	ess: 32	Ware	Mah				Job Numb	per: E25077
Client:		Holdmark					Date:	30-Apr-21
Field Staf	f:	AS					Sampling	Location ID 32-BHW4M
Well Loca	ation:						Round No	
MEDIUM		D.	Groundwa	ter □S	urface Wa	ater	□Stormw	rater Other:
SAMPLIN	IG POINT	INFO					2	
Well Insta	allation Dat	e: 711	1/21				Stickup (r	n): •• 0.05 (+ above ground - below ground)
Initial We	II Depth (m							terval (mBTOC): 1.1-1.6
	Sampling I							SWL (mBTOC): Qry
PID REAL			6					
PID Head	Ispace (pp	m):					PID Back	ground (ppm):
	thing Spac							
PRE PUR	The second secon							
Total Wel	II Depth (m	bgl): 1.5	0				Well Head	d Condition: Coool
SWL (mb		(-25				- may		lumn (m) 8.22
	EPARATE	THE RESERVE THE PERSON NAMED IN COLUMN		IS (PSH)		1000000		
	PSH (mbto			,		117	PSH Visu	ally Confirmed (Bailer):
	kness (mn							
	AND SAME							And the second s
	Method		□Bladde	г Г	⊒Peristaltid	с П	Submersil	ole □Other:
	Pump Inlet						Fill Timer	55-500 V
	essure Reg		i):				Discharge	
	Conditions		7.				Cycle:	
Pump on	THE STATE OF THE S						Pump off	time:
-	QUALITY I	PARAMET	FRS				, amp on	
	ake and Mo						Bump Te	st Date and Time:
	Volume	SWL	Temp	EC	Redox	DO	рН	
Time	(L)	(mbtoc)	(°C)	(µS/cm)	(mV)	(mg/L)	(units)	Comments (colour, turbidity, odour, sheen etc.)
					,			
								2
								-
Stah	l ilisation ra	inge:						
	secutive re		±0.2°C	±3%	±20mV	±10%	±0.2	
MARK COMMON DESCRIPTION	OMMENI	SOBSED	VATIONS]: }:				I
Ne	Feroi	gh c	dom	set	by s	aup1	es on	ly: Sampled at 2:000
SIGNATU	JRE:	Sel		d'				(aa)

Refund at 4:50 + By

Site Address: 32 Wands Client: Holdmark Field Staff: AS Well Location:	Job Number: E25077 Date: 30-Apr-21 Sampling Location ID 32 - ₩7/4 BH(07/4 Round No: □Stormwater □Other:
Client: Holdmark Field Staff: AS	Date: 30-Apr-21 Sampling Location ID 32 – IO 7/4 BH (07/4) Round No:
Field Staff: AS	Sampling Location ID 32 - 1074 BHO74 Round No:
	Round No:

MEDIUM	Dotornwater Bottler.
SAMPLING POINT INFO	
Well Installation Date: 22/4/21	Stickup (m): (+ above ground - below ground
Initial Well Depth (mbgl): 2 \	Screen Interval (mBTOC): (-1-7-1
Previous Sampling Date:	Previous SWL (mBTOC):
PID READINGS	r revious GWE (IIIB r CC).
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	PID Background (ppm).
PRE PURGE	
- CARACTER (1995) - CARACTER (Well Head Condition:
Total Well Depth (mbgl): 2.05	
SWL (mbtoc):	Water Column (m):
PHASE SEPARATED HYDROCARBONS (PSH)	DCLLViewells Confirmed (Beiler)
Depth to PSH (mbtoc):	PSH Visually Confirmed (Bailer):
PSH Thickness (mm):	
PURGE AND SAMPLE	
	Submersible Other:
Depth of Pump Inlet:	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions:	Cycle:
Pump on time:	Pump off time:
WATER QUALITY PARAMETERS	
Probe Make and Model:	Bump Test Date and Time:
Time $\begin{array}{c ccccc} Volume & SWL & Temp & EC & Redox & DO \\ (L) & (mbtoc) & (^{\circ}C) & (\mu S/cm) & (mV) & (mg/L) \end{array}$	pH (units) Comments (colour, turbidity, odour, sheen etc.
Stabilisation range: ±0.2°C ±3% ±20mV ±10%	±0.2
OTHER COMMENTS/OBSERVATIONS: SIGNATURE:	

Sile Address: II2 Lokand P.A. Makrose Park Jobo Number: E28077.21 Field Staff: AS Sampling Location ID: Qu-112-66 Spulse Ay Well Location: Round No:] MeDIUM BiGroundwater Disurface Water Disturbance Water Column (m): 0 - Previous SWL (mBTOC): 17-21. Previous			WATER	SAMPLI	NG FIELD	SHEET		11 - 20 ₁ a	е	iaustralia
Sampling Location ID :	Site Addre	ess: 112	Whark	RA, M	elrose	Park		Job Numl	ber: E25077	
MeBILOW SGroundwater Surface Water Stormwater Other:	Client:		Holdmark	-				Date:	30-Apr-21	
MeBILOW SGroundwater Surface Water Stormwater Other:	Field Staf	f:	AS					Sampling	Location ID : GIV-112-	106 RU106/4
MEDIUM	Well Loca	ation:	10 1000							9,000
SAMPLING POINT INFO Well Installation Date: 72			R	Groundwa	ter OS	Jurface Wa	ater			
Well Installation Date: 23 12 2 2 2 3 5 5 5 5 5 5 5 5 5			- A	Jiouriawa	tci Lio	dilace vve	201	Потоппи	rater Detrier.	
Initial Well Depth (mbgl): 2.72 Screen Interval (mBTOC): (7.7.21)				121				Stickup (r	m): m13	(+ above ground - below ground
Previous Sampling Date: PID READINGS PID Headspace (ppm): PID Breathing Space (ppm): PRE PURGE Total Well Depth (mbgl): Well Head Condition: Water Column (m): Water Column (m): PSH Visually Confirmed (Bailer): PSH Thickness (mm): PURGE AND SAMPLE Sampling Method Bladder Deristaltic Depth of PSH (mbtoc): Pump Pressure Regulator (psi): Water Column (m): Discharge Timer: Well Head Condition: Water Column (m): PSH Visually Confirmed (Bailer): PSH Visually Confirmed (Bailer): PHASE SEPARATED HYDROCARBONS (PSH) Discharge Timer: Wether Conditions: Cycle: Pump off time: WATER QUALITY PARAMETERS Probe Make and Model: Time Volume (L) (mbtoc) (°C) (wS/cm) (mV) (mg/L) (mg/L) Well Head Condition: PSH Visually Confirmed (Bailer): PHASE SEPARATED HYDROCARBONS (PSH) Discharge Timer: Pump off time: Water Column (m): Discharge Timer: Pump off time: Water Column, turbidity, odour, sheen etc.) Stabilisation range: Stabilisation range: 3 consecutive readings 40.2°C ±3% ±20mV ±10% ±0.2 STABILISATION (PSM) Well Head Condition: Water Column (m): Water Column (m): Water Column (m): Onther Comments (colour) PSH Visually Confirmed (Bailer): PHASE Column (m): PSH Visually Confirmed (Bailer): PHASE Column (m): PSH Visu										
PID READINGS PID Breathing Space (ppm):			0 /	4-						C-4m
PID Breathing Space (ppm):			Date:					Previous	SVVL (MBTOC): US	
PID Breathing Space (ppm): PRE PURGE Total Well Depth (mbgl): 2-16 Well Head Condition: Caral Water Column (m): On PHASE SEPARATED HYDROCARBONS (PSH) Depth to PSH (mbtoc): PSH Thickness (mm): PURGE AND SAMPLE Sampling Method Bladder Peristaltic Submersible Other: Depth of Pump Inlet: Pump Pressure Regulator (psi): Weather Conditions: Cycle: Pump off time: WATER QUALITY PARAMETES Probe Make and Model: Time Volume (mbtoc): (L) (mbtoc) ("C") (µS/cm) (mV) (mg/L) (ms/c) (psi): (Modern Conditions): Stabilisation range: 3 consecutive readings Well Head Condition: Water Column (m): On Water Column (m): On PSH Visually Confirmed (Bailer): PUMP THANGET NOTAN (Bailer): PUMP THANGET NOT								DID D	17	
Total Well Depth (mbgl): Z-la Well Head Condition: Cacal Water Column (m): O PHASE SEPARATED HYDROCARBONS (PSH) Depth to PSH (mbtoc): PSH Thickness (mm): PSH Visually Confirmed (Bailer): PSH Thickness (mm): PURGE AND SAMPLE Sampling Method Bladder Peristaltic Submersible Other: Pfill Timer: Discharge Timer: Cycle: Pump pressure Regulator (psi): Discharge Timer: Pump profit time: Pump pressure Regulator (psi): Pump profit time: Pump pressure Regulator (psi): Pump p						•		PID Back	ground (ppm):	•
Well Head Condition:			e (ppm):							
Water Column (m):	PRE PUR	RGE								
PHASE SEPARATED HYDROCARBONS (PSH) Depth to PSH (mbtoc): PSH Visually Confirmed (Bailer): PSH Thickness (mm): PURGE AND SAMPLE Sampling Method □Bladder □Peristaltic □Submersible □Other: Depth of Pump Inlet: Fill Timer: □Discharge Timer: Weather Conditions: □Pump off time: Water Quality PARAMETERS Probe Make and Model: Bump Test Date and Time: Time Volume (mbtoc) SWL ("C") Redox ("M") DO (mg/L) PH (units) Comments (colour, turbidity, odour, sheen etc.) Time Volume (L) SWL ("C") Redox ("M") DO (mg/L) PH (units) Comments (colour, turbidity, odour, sheen etc.) Image: Colour (L) Image: Colour ("C")	Total Wel	ll Depth (m	nbgl): 2	16				Well Hea	d Condition: Cool	
Depth to PSH (mbtoc): PSH Trikchess (mm): PSH Trikchess (mm): PURGE AND SAMPLE Sampling Method Bladder Peristaltic Submersible Other:	SWL (mb	toc):	Day					Water Co	olumn (m): O~	Y-1
PSH Thickness (mm): PURGE AND SAMPLE Sampling Method	PHASE S	EPARATE	D HYDRO	CARBON	IS (PSH)					
PSH Thickness (mm): PURGE ND SAMPLE Sampling Method	Depth to	PSH (mbto	oc):					PSH Visu	ally Confirmed (Bailer):	
Purge AND SAMPLE Sampling Method										
Sampling Method □Bladder □Peristaltic □Submersible □Other:										
Depth of Pump Inlet:				ПВІздде	уг Г	7Paristalti	С	Suhmersil	hle DOther	
Pump Pressure Regulator (psi): Discharge Timer: Weather Conditions: Cycle: Pump on time: Pump off time: WATER QUALITY PARAMETERS Probe Make and Mode: Bump Test Date and Time: Comments (colour, turbidity, odour, sheen etc.) (L) (mbtoc) (°C) (µS/cm) PM (myl) Comments (colour, turbidity, odour, sheen etc.) Comments (colour, turbidity, odour, sheen etc.) (L) Image: All Imag			·	L Diadde	,1	ar criotaiti				
Veather Conditions: Cycle: Pump on time: Pump off time: Pump o				١١.						
Pump on time: Pump off time: Pump off time:		02 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2).					e rimer.	
WATER QUALITY PARAMETERS Probe Make and Model: Bump Test Date and Time: Time Volume (L) SWL (mbtoc) Temp (°C) EC (μS/cm) Redox (mV) DO (mg/L) pH (units) Comments (colour, turbidity, odour, sheen etc.) Image: A constant of the colour of the			3:					-		
Probe Make and Model: SWL								Pump off	time:	
Time Volume (L) SWL (mbtoc) (°C) (μS/cm) Redox (mV) (mg/L) (mg/L) Comments (colour, turbidity, odour, sheen etc.)				ERS						
Time (L) (mbtoc) (°C) (μS/cm) (mV) (mg/L) (units) Comments (colour, turbidity, ododr, sheen etc.)	Probe Ma	ake and Mo	odel:					Bump Te	st Date and Time:	
3 consecutive readings	Time	Street Street Street Street			1000000			0.000	Comments (colour, turk	oidity, odour, sheen etc.)
3 consecutive readings										*po
3 consecutive readings										
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3 consecutive readings										
	A TOTAL CONTROL OF THE			±0.2°C	±3%	±20mV	±10%	±0.2		
Dry-No samples taken	OTHER C	COMMEN	TS/OBSEF	VATIONS	3:					
SIGNATURE: // / /		Dry-	-No	sampl	les ta	her				
	SIGNATU	JRE:	100		11	,				



								elaustralia
Site Addres	ss: 112 t	where	ed, M	elose	Posh		Job Numb	per: E25077
Client:		Holdmark					Date:	30-Apr-21
Field Staff:		AS					Sampling	Location ID WW- 112BH 110M-1
Well Locat							Round No	
MEDIUM		250	Groundwat	ter 🗆 S	urface Wa	iter	□Stormw	
SAMPLING	G POINT							
Well Install			4(21				Stickup (n	n):
Initial Well								terval (mBTOC): 0-9-1-4
Previous S			,					SWL (mBTOC): 0
PID READ		- 3.0.						(1)
PID Heads	35 (34) 30 72 27 27 2	m).					PID Back	ground (ppm):
PID Breath					•		D Dawk	2 / [kk].
PRE PUR	at the same of the	с (ррпп).						
Total Well		hal). I "	31				Well Head	d Condition: load
SWL (mbto) [lumn (m):
PHASE SE			CARRON	IS (PSH)	1		.,, ato, 00	······· (111/). D
Depth to P			CANDON	(I-3H)			PSH Vieu	ally Confirmed (Bailer):
							I OH VISU	any Committee (Dailer).
PSH Thick								
PURGE AI		LE	Пр:		1Da-1-7-11		Cb	nlo DOthor:
Sampling			□Bladde	r L]Peristaltio	с Ц	Submersib	Section 1 Sectio
Depth of P							Fill Timer:	
Pump Pres):				Discharge	e Timer:
Weather C		:					Cycle:	
Pump on ti		J. 0. 2001-24 D. Arrow-Use-	***************************************				Pump off	time:
WATER Q		9.5 196.5	ERS					
Probe Mak								st Date and Time:
Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
								11
Stabil	lisation ra	inge:						
	ecutive re		±0.2°C	±3%	±20mV	±10%	±0.2	
OTHER C			VATIONS	: :				
STILK OF		5-N						
SIGNATU	RE:	Sel	,	1				

WATER SAMPLING FIELD SHEET eiaustralia Site Address: 112 Whert Rt, Melrone Part Job Number: E25077 30-Apr-21 Holdmark Date: Client: Field Staff: Sampling Location IDaw- 112-BH112M Well Location: Round No: MEDIUM **⊠**Groundwater □Surface Water □Stormwater □Other: SAMPLING POINT INFO 22/4/21 Stickup (m): -0-12 (+ above ground - below ground) Well Installation Date: Screen Interval (mBTOC): 0.6-6-5 Initial Well Depth (mbgl): Previous SWL (mBTOC): Previous Sampling Date: PID READINGS PID Background (ppm): PID Headspace (ppm): . PID Breathing Space (ppm): PRE PURGE Well Head Condition: Cond Total Well Depth (mbgl): Water Column (m): O SWL (mbtoc): PHASE SEPARATED HYDROCARBONS (PSH) PSH Visually Confirmed (Bailer): Depth to PSH (mbtoc): PSH Thickness (mm): **PURGE AND SAMPLE** □Peristaltic □Other: □Bladder □Submersible Sampling Method Fill Timer: Depth of Pump Inlet: Pump Pressure Regulator (psi): Discharge Timer: Weather Conditions: Cycle: Pump off time: Pump on time: WATER QUALITY PARAMETERS Bump Test Date and Time: Probe Make and Model: DO Volume SWL Temp EC Redox рН Comments (colour, turbidity, odour, sheen etc.) Time (units) (µS/cm) (mV) (mg/L) (L) (mbtoc) (°C)

OTHER COMMENTS/OBSERVATIONS:

Stabilisation range:

3 consecutive readings

By-No samples

±0.2°C

±3%

±20mV

±10%

±0.2

WATER	SAMPLING	FIELD	SHEET



							-4-1-17	Claustralia
Site Addr	ess: 117	Wher-	2 Rel				Job Numb	per: E25077
Client:		Holdmark					Date:	30-Apr-21
Field Staf	f:	AS	1776				Sampling	Location ID 112-BH113M - 1
Well Loca	ation:						Round No	o: \
MEDIUM		Çk	Groundwat	ter 🗆 S	Surface Wa	ater	□Stormw	rater Other:
SAMPLIN	IG POINT	INFO						
Well Insta	allation Da	te: 22/4	121				Stickup (n	n): -5-(2 (+ above ground - below ground)
Initial We	II Depth (n	nbgl): 4	.3				Screen In	terval (mBTOC): \-3 - 43
	Sampling							SWL (mBTOC): dry
PID REA	The second second second							
PID Head	dspace (pp	m):					PID Back	ground (ppm): .
PID Brea	thing Spac	e (ppm):				-	-	2.2
PRE PUF		,,,,,,						
Total We	II Depth (m	nbgl): 4	.20				Well Head	d Condition: Cooch
SWL (mb		3.2						olumn (m): 1-00~
			CARBON	S (PSH)				
	PSH (mbto			,/			PSH Visu	ally Confirmed (Bailer):
	kness (mr							
	AND SAMI							
	g Method		□Bladde	r [⊒Peristalti	с П	Submersik	ole □Other:
		1. 4.00	3.783				Fill Timer:	2555 S 10 11 11 12 12 12 12 12 12 12 12 12 12 12
	essure Reg			rance	0.0			e Timer: 55
	Conditions		1).				Cycle:	
	time: (:		>				-	time: 1:40
	QUALITY		TERC				rump on	une. (.40
	ake and Mo		EKS				Rump To	st Date and Time:
Probe Ma				F0	Destant			St Date and Time.
Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
1-17	0.5	3.39	20.63	612	110.9		5.93	lette grey brown, high, no, w
1:21	1.0	3.47	20.61	603	114.4	0.66	5.90	11 11-1
125	1.5	3.59	20.57	596	114.7	0.75	5.71	
			200					
		/						
		۷						
								\
						Year		
			1					
Stat	oilisation ra	ange:	10.000	J-20/	T00~-71	4400/	40.0	
3 cons	secutive re	adings	±0.2°C	±3%	±20mV	±10%	±0.2	
OTHER O	Sompli	PFAS	RVATIONS	3.45n				
					//			
SIGNATI	JRE: /	11	1 .		1/			
	12	w	1					

Appendix I - Chain of Custody and Sample Receipt Forms

16 4 0 3.55 C

Sheet 1 of 13	16				Sam	Sample Matrix	atrix					1	1		- _P	Analysis				11		1	1	Comments
82 Hughes Ave, Ermington, 30-32 Waratah St and 112 E25077 Wharf Rd, Melrose Park	gton, 30-32	Waratah St a	nd 112 E2:	5077					s						nge)					19	1		,	Cadmium Chromium Copper
Laboratory:	SGS Australia Unit 16, 33 Ma ALEXANDRIA P: 02 8594 040	SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499	et, 5 94 0499					RH/BTEX/PAH: /PCB/Asbestos	RH/BTEX/PAH	RH/BTEX			,	Quantification	(cation exchar	electrical condu	ng Suite			i			A / / PAH	Mercury Nickel Zinc HM® Arsenic
Sample	Laboratory	Container	Sampling	ling	TER	L	-		A /T	A /T	X)s	estos	estos	CEC		ateri	CAS	s	nates	rides	1	P HN	Chromium
₽ .	ō	Type	Date	Time	WA.	SOI	ОТН		НМ	НМ	ВТЕ	VOC	Asb	Asb	pH/		Dew	sPO	PFA	Sulpl	Chlo		TCL	Mercury
82-BHIOLM_O.405	,	コンゴノンとい	26/4/21	anyon		х																		Nickel Dewatering Suite
0,4-1,0		_	_	_																				pH & EC TDS / TDU
-14-15																								Total Cyanide Metals (Al, As, Cd, Cr,
82-BH102M-04-06	-	6							X															Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4)
0.1-3-0																								PAH
7.4.15															-	SGS EHS Sydney COC	S SH	ydn	ву С	00				LABORATORY
0.2-3:1-																SE218963	27	39	3					v Standard
5.4-5.5																								24 Hours
29-30																								48 Hours
75-36																								72 Hours
-3.9-40											,			,										Other
54-47-		+	4	<		(
Container Type: J = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass bottle	sed, Tefton sea	aled glass jar e				Inve	estigato	or: I att	est tha stand	it these ard El	e samp field s	est that these samples were standard EI field sampling	ere coll	e collected in procedures.	п ассо	Investigator: I attest that these samples were collected in accordance with standard El field sampling procedures.	vith		Repo	ort with	El Was	te Clas	ssification	Report with El Waste Classification Table
P = natural HDPE plastic bottle	He He					Sampler's Name (EI):	r's Nan	ne (EI):				Receiv	ived by	ed by (SGS):				Samp	ler's C	Sampler's Comments:	ıts:			
ZLB = Zip-Lock Bag					L	Print		Andrew Schmidt	w Sch	midt		Print	-	C	1	y h		Plea	Please cc	-)		:	
			Suite 6.01, 55 Miller Street,	Viller Stree	,,	Signature	As	0	K	In		Sigr	Signature	C	b	-		And	rew.	orani	m@c	nausi	trana.	Andrew.ibranim@eiaustrana.com.au
	<u>;</u>		Ph: 9516 0722	0722		Date		23/04/2021	/2021	-		Date		1/2	+	2.5	9							
Contamination Remediation	1 Geotechnical		lab@eiaustralia.com.au	lia.com.au		IMPORTANT:	ORT.	TN						-										
CONGRESSION HEIROGO			COC March 2018 FORM v.4 - SGS)RM v.4 - SGS		Please e-mail laboratory results to: lab@eiaustralia.com.au	e-mail	labora	tory rea	sults to	: lab(@eia	ustra	lia.co	m.au	_								

Sheet 7 of 13					620	Sample Matrix) fric										ŀ						
				Project No:	-	1	20.55					-	-	١,	- Idiyələ	Be	3	1					Comments
82 Hughes Ave, Ermington, 30-32 Waratah St and 112 E25077 Wharf Rd, Melrose Park	gton, 30-32 k	Waratah St	and 112 E	25077				;								lopp.Ia							Arsenic Cadmium Chromium Copper
Laboratory:	SGS Australia Unit 16, 33 Ma ALEXANDRIA P: 02 8594 040	SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499	reet, 15 8594 0499					RH/BTEX/PAH: PCB/Asbestos	RH/BTEX/PAH	RH/BTEX				Quantification	(cation exchar	OC!						A//PAH	Meccury Nickel Zinc HM B
Sample	Laboratory	Container	Sa	Sampling	ΓER	_			A /TF	A /TF			estos			LO (CAS	S	nates	ides		P HM	Cadmium Chromium
ō	D	Туре	Date	Time	WA	SOII	OTH		HM '	HM '	BTE	VOC				p111	sPO	PFA	Sulph	Chlor		TCL	Lead
82-BH102M-4445		27.5	12/4/25	compa		×						_	-	-									Nickel Dewatering Suite
02-P.P.		_	_	1		_					-					-							PH & EC TDS / TDU
5.2-4-5.5																	*						Total Cyanide Metals (Al. As. Cd. Cr.
30-BHIOL -02-91	2								\times				X			\times		X					Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4)
205-00	W								X				X										PAH
-0.9-1.0	÷								X				×										LABORATORY
21-4-1-5																							v Ctandard
2.9-3.0										,													A Standard
3.4-4.5	7								\times			_					•						AS Hours
5.4-5.5			_																				72 Hours
26.9-7.0			_										-	-									Other
50-5-H02M5-08	3 6	4	4	4		\(\)			\times				^			X		X					[
Container Type: J = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass botlle	sed, Tefton se	ealed glass jar				lnv	Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.	or: I atte	est that standar	these s	est that these samples were collected in standard El field sampling procedures.	were c	ollecte	d in acc	ordanc	e with		Repo	ort with	Report with El Waste Classification Table	e Class	ification	Table
P = natural HDPE plastic bottle	i iii ii					Sample	Sampler's Name (EI):	ne (EI):			R	Received by (SGS):	by (SG	s):			Sam	pler's C	Sampler's Comments:	nts:			
ZLB = Zip-Lock Bag						Print		Andrew Schmidt	/ Schm	idt		Print	C	~	Z	1	Plea	Please cc:)		:	
		S	uite 6.01, 5	Suite 6.01, 55 Miller Street,	et,	Signature	1	131	·	60	- 10	Signature	Φ	Cal)		And	irew.	branı	m@e	laustr	alia.c	Andrew.lbrahim@eiaustralia.com.au
			Ph: 95	Ph: 9516 0722		Date		23/04/2021	2021			Date	2	717	7 0	3							
Contamination Remodiation Geotechnical	Geotechnical		ab@eiaus	lab@eiaustralia.com.au	JI.	IMPO	IMPORTANT:	NT:)		-										
			COC March 201	COC March 2018 FORM v.4 - SGS			The second secon	doorday	ory rose	10.	8	1000	2 2 2		2		+						

Contamination Remodiation Geotechnical			ZLB = Zip-Lock Bag	VC = glass vial, Tefton Septum	P = natural HDPE plastic bottle	Container 1 ype: J = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass bottle	20-21 13	04-10	30-84104-24-05 (2	47-5-1-	11 01-20-	30-BH103_03-04 10	1.7-0.2	3.5-36	24-2.5	-20-21 8	_1.2-1.3	3-BHIOZMAS-OG 7	ID	Sample Laboratory	Laboratory: SGS AI Unit 16 ALEXA P: 02 8	82 Hughes Ave, Ermington, 30-32 Waratah St and 112 E25077 Wharf Rd, Melrose Park	Site:	Sheet 5 of (3	
thrical						on sealed glass j s botlle	+		\							b	_	2005	Туре	0	SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499	0-32 Waratah			
lab@eiaustralia.com.au	Ph: 9516 0722	Suite 6.01, 55 Miller Street,				ar	5										_	20/4/21	Date		treet, 1015 18594 0499	St and 112 E	- T		
@eiaustralia.com.	Ph: 9516 0722	Miller Stre					<											confo	Time	Sampling		25077	Project No:		
ne	4	et,					Г											3	WA	TER				Sar	
IMP	Date	Sign		Print	Samp	ln	1											X	SOI	L				Sample Matrix	
IMPORTANT: Please e-mail laboratory results to: lab@eiaustralia.com.au		Signature			Sampler's Name (EI):	Investigator: I attest that these samples standard EI field samp													ОТН	HER				latrix	
ANT:	23/04	Se	2	Andro	me (EI):	or: I att															RH/BTEX/PAH P/PCB/Asbesto				
tory res	23/04/2021		000	Andrew Schmidt		est tha	X	1	×		×	×	X			X		×	НМ	^ /T	RH/BTEX/PAH	łs			
ults to:		8	į	4		est that these samples were collected in standard El field sampling procedures.													НМ	^A /T	RH/BTEX				
lab@						sample ield sar	L						,						ВТЕ	EX					
eiaus		Print (SGS):	Receive		L												VO	Cs							
stralia	Signature (:	d by (S	collect	\times		X		\times	\times	X			×		\times	Asb	esto	s						
com			GS):	ed in a	L												Asb	esto	s Quantification	n					
<u>a</u>		.1		were collected in accordance with ling procedures.	L												рΗ	/ CEC	C (cation excha	ange)	Analysis				
	2.		6			nce wit	_		,										рН	/ EC	(electrical cond	ductivity)	2.	1	
								_	X			×						1			UY:		U	BS	
Please cc: Andrew.Ibrahim@eiaustralia.com.au						71	L	-												CAS					
ew.Ibr					Sampler's Comments:	Report v	Report with El Waste Classification Table	L	-	X										PFA					
omments						vith EI \	-	-												hate				-	
		wera.				Vaste (\vdash	-		_									Chlo	rides					
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		m.au				able	*****	Other	72 Hours	48 Hours	24 Hours	x Standard	LABORATORY TURNAROUND	PAH	Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4) BTEX	Total Cyanide Metals (Al, As, Cd, Cr,	pH & EC TDS / TDU	Nickel Dewatering Suite	Lead Mercury	Chromium	Mercury Nickel Zinc HM ⁸ Arsenic	Cadmium Chromium Copper Lead	HM ^A Arsenic	Comments	

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Comments							Analysis	Ą						٦	Matrix	alnma	0						1	





SAMPLE RECEIPT ADVICE

Manager

CLIENT DETAILS

Telephone

LABORATORY DETAILS

Andrew Ibrahim Contact

EI AUSTRALIA Client Address

SUITE 6.01 55 MILLER STREET

PYRMONT NSW 2009

61 2 95160722

(Not specified) Facsimile

andrew.ibrahim@eiaustralia.com.au Email

E25077 82 Hughes Ave, Ermington, 30-32 W Project

E25077 Order Number Samples 29

Laboratory Address

Huong Crawford SGS Alexandria Environmental

Unit 16, 33 Maddox St

Alexandria NSW 2015

+61 2 8594 0400 Telephone

+61 2 8594 0499 Facsimile

Fmail au.environmental.sydney@sgs.com

Mon 3/5/2021

Samples Received Fri 23/4/2021

Report Due SE218963 SGS Reference

SUBMISSION DETAILS

This is to confirm that 29 samples were received on Friday 23/4/2021. Results are expected to be ready by COB Monday 3/5/2021. Please quote SGS reference SE218963 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Yes

SGS

Yes

Samples clearly labelled Sample container provider Samples received in correct containers Date documentation received Samples received in good order

26/4/2021 @3.35PM Yes 10.0°C Sample temperature upon receipt Turnaround time requested Standard

Complete documentation received

Yes Ice Bricks Sample cooling method Sample counts by matrix 29 Soil Type of documentation received COC Samples received without headspace N/A Sufficient sample for analysis Yes

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

42 samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed. PFAS subcontracted to SGS Melbourne, Unit 10/585 Blackburn Road Notting Hill VIC 3168, NATA Accreditation Number 2562, Site number 14420. Results may be delayed.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

SGS Australia Pty Ltd ABN 44 000 964 278

Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia

t +61 2 8594 0400 f +61 2 8594 0499

www.sgs.com.au



SAMPLE RECEIPT ADVICE

CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 82 Hughes Ave, Ermington, 30-32 W

- SUMMARY OF ANALYSIS -

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	82_BH102M_0.4-0.6	-	-	26	-	7	10	11	7
002	30-BH101_0.2-0.3	29	14	26	11	7	10	11	7
003	30-BH101_0.5-0.6	-	-	26	-	7	10	11	7
004	30-BH101_0.9-1.0	-	-	26	-	7	10	11	7
005	30-BH101_4.4-4.5	-	-	26	-	7	10	11	7
006	30-BH102M_0.2-0.3	29	14	26	11	7	10	11	7
007	30-BH102M_0.5-0.6	-	-	26	-	7	10	11	7
008	30-BH102M_2.0-2.1	-	-	26	-	7	10	11	7
009	30-BH102M_4.0-4.1	-	-	26	-	7	10	11	7
010	30-BH103_0.3-0.4	29	14	26	11	7	10	11	7
011	30-BH103_0.9-1.0	-	-	26	-	7	10	11	7
012	30-BH104_0.4-0.5	29	14	26	11	7	10	11	7
013	30-BH104_2.0-2.1	-	-	26	-	7	10	11	7
014	30-BH104_2.7-2.5	-	-	26	-	7	10	11	7
015	30-BH105_0.4-0.5	29	14	26	11	7	10	11	7
016	30-BH106M_0.3-0.4	29	14	26	11	7	10	11	7
017	30-BH106M_1.1-1.2	-	-	26	-	7	10	11	7
018	30-BH106M_1.9-2.0	-	-	26	-	7	10	11	7
019	30-BH106M_3.4-3.5	-	-	26	-	7	10	11	7
020	30-BH107_0.3-0.4	-	-	26	-	7	10	11	7
021	30-BH107_0.9-1.0	-	-	26	-	7	10	11	7
022	30-BH107_2.3-2.4	-	-	26	-	7	10	11	7
023	30-BH108_0.2-0.3	29	14	26	11	7	10	11	7
024	30-BH108_0.4-0.5	-	-	26	-	7	10	11	7

_ CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

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Testing as per this table shall commence immediately unless the client intervenes with a correction .

26/04/2021 Page 2 of 5





_ CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 82 Hughes Ave, Ermington, 30-32 W

- SUMMARY OF ANALYSIS

No.	Sample ID	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	30-BH108_1.2-1.3	26	7	10	11	7
026	30-BH108_2.7-2.8	26	7	10	11	7
027	30-BH109_0.3-0.4	26	7	10	11	7
028	30-BH110M_0.2-0.3	26	7	10	11	7
029	30-BH110M_1.4-1.5	26	7	10	11	7

_ CONTINUED OVERLEAF

26/04/2021 Page 3 of 5



CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 82 Hughes Ave, Ermington, 30-32 W

- SUMMARY OF ANALYSIS -

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content	Per- and Polyfluoroalkyl Substances (PFAS) in
001	82_BH102M_0.4-0.6	-	1	1	-
002	30-BH101_0.2-0.3	2	1	1	55
003	30-BH101_0.5-0.6	2	1	1	-
004	30-BH101_0.9-1.0	2	1	1	-
005	30-BH101_4.4-4.5	2	1	1	-
006	30-BH102M_0.2-0.3	2	1	1	55
007	30-BH102M_0.5-0.6	2	1	1	-
008	30-BH102M_2.0-2.1	2	1	1	-
009	30-BH102M_4.0-4.1	2	1	1	-
010	30-BH103_0.3-0.4	2	1	1	-
011	30-BH103_0.9-1.0	2	1	1	-
012	30-BH104_0.4-0.5	2	1	1	55
013	30-BH104_2.0-2.1	2	1	1	-
014	30-BH104_2.7-2.5	2	1	1	-
015	30-BH105_0.4-0.5	2	1	1	-
016	30-BH106M_0.3-0.4	2	1	1	55
017	30-BH106M_1.1-1.2	2	1	1	-
018	30-BH106M_1.9-2.0	2	1	1	-
019	30-BH106M_3.4-3.5	2	1	1	-
020	30-BH107_0.3-0.4	2	1	1	-
021	30-BH107_0.9-1.0	2	1	1	-
022	30-BH107_2.3-2.4	2	1	1	-
023	30-BH108_0.2-0.3	2	1	1	-
024	30-BH108_0.4-0.5	2	1	1	-

_ CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

26/04/2021 Page 4 of 5

The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .





CLIENT DETAILS _ Client El AUSTRALIA

Project E25077 82 Hughes Ave, Ermington, 30-32 W

- SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
025	30-BH108_1.2-1.3	2	1	1
026	30-BH108_2.7-2.8	2	1	1
027	30-BH109_0.3-0.4	2	1	1
028	30-BH110M_0.2-0.3	2	1	1
029	30-BH110M_1.4-1.5	2	1	1

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document. The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .

26/04/2021 Page 5 of 5

Yin, Emily (Sydney)

From:

Andrew Ibrahim - ElAustralia < andrew.ibrahim@eiaustralia.com.au>

Sent:

Monday, 10 May 2021 3:16 PM

To:

AU.SampleReceipt.Sydney (Sydney); AU.Environmental.Sydney (Sydney)

Subject:

[EXTERNAL] RE: Report Job SE218963, your reference E25077 Hughes, Waratah, Wharf Melrose Pk, order number E25077

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Hi SGS,

Please test samples 30-BH101_2.9-3.0 & 30-BH101_5.4-5.5

For Lead & TCLP Lead and Arsenic & TCLP Arsenic on 24 hrs TAT.

Thank you.

Kind regards,

SGS EHS Alexandria Laboratory

Received: 10 - May - 2021

Andrew Ibrahim

MEng. (Env), BEng. (Che)

Chemical / Environmental Engineer

T 02 9516 0722 M 0451224922 E andrew.ibrahim@eiaustralia.com.au

Suite 6.01, 55 Miller Street Pyrmont, NSW 2009

www.eiaustralia.com.au

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Please consider the environment before printing this email.

From: AU.Samplereceipt.Sydney@SGS.com [mailto:AU.Samplereceipt.Sydney@SGS.com]

Sent: Tuesday, 4 May 2021 12:13 PM

To: Andrew Ibrahim - EIAustralia; Andrew Schmidt - EIAustralia; Laboratory Results - EIAustralia

Subject: Report Job SE218963, your reference E25077 Hughes, Waratah, Wharf Melrose Pk, order number E25077

Dear Valued Customer,

Please find attached the report for SGS job SE218963, your reference E25077 Hughes, Waratah, Wharf Melrose Pk, order number E25077.

How are we doing? Please take a quick online Survey





CLIENT DETAILS

Telephone

Facsimile

Project

LABORATORY DETAILS

Contact Andrew Ibrahim

Client EI AUSTRALIA Address SUITE 6.01

55 MILLER STREET

PYRMONT NSW 2009

61 2 95160722 (Not specified)

Email andrew.ibrahim@eiaustralia.com.au

E25077 Hughes, Waratah, Wharf Melrose Pk

Order Number **E25077**Samples 31

Manager Huong Crawford

Laboratory SGS Alexandria Environmental

Address Unit 16, 33 Maddox St

Alexandria NSW 2015

Telephone +61 2 8594 0400

Facsimile +61 2 8594 0499

Email au.environmental.sydney@sgs.com

SE218963B

Samples Received Mon 10/5/2021
Report Due Tue 11/5/2021

SGS Reference

SUBMISSION DETAILS

This is to confirm that 31 samples were received on Monday 10/5/2021. Results are expected to be ready by COB Tuesday 11/5/2021. Please quote SGS reference SE218963B when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled Complete documentation received Yes Yes Sample container provider SGS Ice Bricks Sample cooling method Samples received in correct containers Sample counts by matrix 2 Soil Yes 10/5/2021@3:16pm Date documentation received Type of documentation received **Fmail** Samples received in good order Yes Samples received without headspace N/A 10.0°C Sample temperature upon receipt Sufficient sample for analysis Yes Turnaround time requested Next Day

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS -

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

SGS Australia Pty Ltd ABN 44 000 964 278 Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia t +61 2 8594 0400 f +61 2 8594 0499





CLIENT DETAILS _ Client El AUSTRALIA Project E25077 Hughes, Waratah, Wharf Melrose Pk

SIIMMADV	OF ANALYSIS —				
JUNINAITI	OI AIVALISIS				
No.	Sample ID	Metals in TCLP Extract by ICPOES	Moisture Content	TCLP (Toxicity Characteristic Leaching	Total Recoverable Elements in Soil/Waste
030	30-BH101_2.9-3.0	2	1	6	2
031	30-BH101_5.4-5.5	2	1	6	2

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

10/05/2021 Page 2 of 2

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Testing as per this table shall commence immediately unless the client intervenes with a correction .

P = natural HDPE plastic bottle VC = glass vial, Tefton Septum ZLB = Zip-Lock Bag S = solvent washed, acid rinsed glass botlle J = solvent washed, acid rinsed, Tefton sealed glass jar 20-13-1117.02-02 Container Type: 3)-BHIMA D-2-0. Sheet 30-BH(10M2-2-23 82 Hughes Ave, Ermington, 30-32 Waratah St and 112 E25077 Wharf Rd, Melrose Park _aboratory: elaust Sample ID 1×1-8-4 3.5-3.6 29-30 34-35 4.1-4.2 _29-3.0 22-23 5-1-7-1-5 90-50 of 13 Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499 SGS Australia Laboratory 2×3, 26 203 Container 4/21 C Suite 6.01, 55 Miller Street, lab@eiaustralia.com.au **PYRMONT NSW 2009** 21/4/21 Ph: 9516 0722 Date 175.2 Sampling Project No: 3 Time Sample Matrix WATER Please e-mail laboratory results to: lab@eiaustralia.com.au MPORTANT: Sampler's Name (EI): Date Signature Print X SOIL Investigator: I attest that these samples were collected in accordance with OTHER 23/04/2021 Andrew Schmidt HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos standard El field sampling procedures. HM A /TRH/BTEX/PAHs HM A /TRH/BTEX BTEX Received by (SGS): Print Signature Date **VOCs** Asbestos Asbestos Quantification 6 pH / CEC (cation exchange) Analysis 9 SE218964 SGS EHS Sydney COC pH / EC (electrical conductivity) Please cc: Andrew.lbrahim@eiaustralia.com.au Sampler's Comments: **sPOCAS** Report with El Waste Classification Table **PFAS** Sulphates Chlorides TCLP HM A/ / PAH Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4) BTEX PAH pH & EC Arsenic Cadmium Chromium Lead Mercury Mercury Nickel Copper Total Cyanide Hardness TDS / TDU **Dewatering Suite** Nickel MM B Zinc Lead TURNAROUND LABORATORY Chromium Cadmium Arsenic A WH X Standard Other Comments 48 Hours 72 Hours 24 Hours

	Contamination Remediation Geotechnical	0.010		- 1	ZLB = Zip-Lock Bag	VC = glass vial, Tefton Septum	S = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass bottle	Container Type:		117-13HIOLML0-20-3	-0.6-0.7	117-BH105-02-03	27-08	112-BHIOY_22-03	-0.5-06	117-BH103_0-207	27-08	112-BH10204-05	0.6-07	1112-8HIOLD-3-0-4	5	Sample	Laboratory:	82 Hughes Ave, Ermington, 30-32 Waratah St and 112 Wharf Rd, Melrose Park	Site:
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			Andrew.lbrahim@eiaustralia.com.au				Report with El Waste Classification Table	[Other	72 Hours	48 Hours	24 Hours	X Standard	TURNAROUND	LABORATORY	BTEX PAH	Cu, Pb, Hg, Ni, Zn)	Hardness Total Cyanide	pH & EC TDS / TDU	Nickel	Lead			HM A Arsenic Cadmlum Chromium Copper	Comments

Contamination Remediation	מומו מלימום			ZLB = Zip-Lock Bag	VC = glass vial, Tefton Septum	J = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass bottle P = natural HDPF plastic bottle	Container Type:	- L - CO	6 91	2-1-4-1-	20.7-0.3	117-BH109-23-04	1-1-1-2	-0.7-0.8	112-BH108-62-03	0-7-10	117-BH107-0.2-03	-1-4-20	ID-BHIOGM-14-15	ō	Sample	Laboratory:	82 Hughes Ave, Ermington, 30-32 Waratah St and 112 Wharf Rd, Melrose Park	Site:
Geotechnical	<u>.</u>				3 0	ed, Tefton sealed glass botlle	7) (1	7		13	7		11		0		Laboratory	SGS Australia Unit 16, 33 Ma ALEXANDRIA P: 02 8594 040	ington, 30 Aelrose Pa	
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IMPORTANT: Please e-mail laboratory results to: lab@ei	Date	Date	Signature	Print	Sampler's Name (EI):	Invest	1		+	_	,							_	X	SOI	L			Sample Matrix
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Acceptance Park Laboratory: Lecture 1	Site: 82 Hughes Ave Ermington
SGS Australia	Hugnes Ave, Ermington, d 112 Wharf Rd, Melrose
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Suite 6.01, 55 Miller Street, PYRMONT NSW 2009 Ph: 9516 0722 lab@eiaustralia.com.au	Container Type: J = solvent washed, acid rinsed, Tefton seal S = solvent washed, acid rinsed glass bottle
Suite 6.01, 55 Miller Street, PYRMONT NSW 2009 Ph: 9516 0722 lab@eiaustralia.com.au	VC = glass vial, Tefton Septum ZLB = Zip-Lock Bag
Ph: 9516 0722 lab@eiaustralia.com.au	3
	Contamination Remediation Geotechnic

Contamina)	,	ZED - ZIP-LOCK BAG	VC = glass vi	P = natural H	J = solvent w	Container Type:	-(32-BHIO	1	Ь	32-BH105-02-03		32-BHIO)	10	5- BHD3 0-3-04		32-BH		Sample	Laboratory:	82 Hughes Wharf Rd,	Site:	Sheet 11
Contamination Aemediation Geotectriscal			x pag	VC = glass vial, Tefton Septum	P = natural HDPE plastic bottle	J = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass botlle	pe:	0.4-1.0	32-BHIOC-0.2-03	-1.2-1.3	D.S-0.6	5_02-03	1-1-61	37-BHIO4M-0203	14-15	01-1-0	4.0-5.	0.44.0	BH102_02-03	ō	nple		82 Hughes Ave, Ermingt Wharf Rd, Melrose Park		41 to 7
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IMPORTANT: Please e-mail laboratory results to: lab@eiaustralia.com.au	Date	Signature		Print	Sampler's Name (EI):		Invest	+										_	×	SOI					Sample Matrix
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		Andrewtoranin(<i>we</i> raustrana.com.au	-			Report with El Waste Classification Table	-													-1		I A/ / PAH			
		m.au				Table			Other	72 Hours	48 Hours	24 Hours		LABORATORY	PAH	Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4)	Hardness Total Cyanide Metals (Al. As. Cd. Cr.	PH & EC TDS / TDU	Nickel Dewatering Suite	Lead	Cadmium Chromium	Mercury Nickel Zinc HM [®]	Arsenic Cadmium Chromium Copper	HM △	Comments

Company technic (Active) and a	eiaustr			ZLB = Zip-Lock Bag	VC = glass vial, Tefton Septum	S = solvent washed, acid rinsed glass bottle	J = solvent washed, acid rinsed, Tefton sealed glass jar								_2-2-2-i	11-0-11	32-BH107M_0.203	GC-5:1 -	32-84102-14-15	ē	Sample	Laboratory:	82 Hughes Ave, Ermington, 30-32 Waratah St and 112 E25077 Wharf Rd, Melrose Park	Site:	Sheet 12 of 3
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			m.au			lable	Table	Other	72 Hours	48 Hours	24 Hours	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Standard	LABORATORY TURNAROUND	BTEX PAH	Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4)	Hardness Total Cyanide Metak (A) As Cd Cr	Dewatering Suite pH & EC TDS / TDU	Nickel	Lead	Cadmium Chromium	Medo Mickel Vickel Zinc HM e	Arsenic Cadmium Chromium Copper	HM >	Comments

OTHER HM ^ /TRH/BTEX/PAH OCP/OP/PCB/Asbestos HM ^ /TRH/BTEX/PAH HM ^ /TRH/BTEX/PAH HM ^ /TRH/BTEX/PAH HM ^ /TRH/BTEX BTEX VOCs Asbestos Quantification Print Signature Signature Dewatering Suite	SS Australia Sampling Date Time WATER SOIL OTHER HMA* / TRRH/BTEX/PAHs SOIL OTHER HMA* / TRRH/BTEX/PAHs HMA* / TRRH/BTEX/PAHs SOCP/OP/PCB/Asbestos HMA* / TRRH/BTEX ST VC Loby Require Note: Sampler's Name (E): Sampler's Name (E): Sampler's Name (E): Received by (SGS): Rece		©eiaustralia.com.au	IMPORTANT: Please e-mail laboratory results to: lab@eiaustralia.com.au	IMPORTANT:	Ph: 9516 0722 lab@eiaustralia.com.au coc мясь 2018 FORMv.4. sgs	Pl lab@e	tralia ation Geotechnical	Contamination Remediation Geotechnical
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et 12 of 12		ı							5

Yin, Emily (Sydney)

From:

AU.Environmental.Sydney (Sydney)

Sent:

Monday, 26 April 2021 3:39 PM

To:

AU.SampleReceipt.Sydney (Sydney)

Subject:

FW: [EXTERNAL] E25077.E02 - Melrose Park

Attachments:

26042021153123-0001.pdf

Hi Emily

Please do this

Regards,

Paul Harley

Industries and Environment

Client Manager

Phone: +61 (0)2 8594 0400 Direct: +61 (0)2 8594 0449 Mobile: +61 (0)4 0797 2867

(Please note my new working hours of Mon-Fri 7:00am-3:00pm)

From: Andrew Ibrahim - EIAustralia <andrew.ibrahim@eiaustralia.com.au>

Sent: Monday, 26 April 2021 3:35 PM

To: AU.Environmental.Sydney (Sydney) <AU.Environmental.Sydney@sgs.com>; Harley, Paul (Sydney)

<Paul.Harley@sgs.com>; Crawford, Huong (Sydney) <Huong.Crawford@sgs.com>

Subject: [EXTERNAL] E25077.E02 - Melrose Park

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Hi SGS team,

Please find attached COCs for the samples delivered last Friday.

As per our discussion, please sub-sample the following to be tested as duplicate samples

5E212963

30-BH103_0.3-0.4 ------ the subsample to have the ID of QD3

58 218964

 * 112-BH101_0.3-0.4 ------ the subsample to have the ID of QD4

QD3 & QD4 to be tested for (HMs, TRH, BTEX and PAHs) on a standard TAT.

32 33 Thank you.

Kind regards,





Manager

Address

Laboratory

CLIENT DETAILS

LABORATORY DETAILS

Andrew Ibrahim Contact

EI AUSTRALIA Client Address **SUITE 6.01**

55 MILLER STREET

PYRMONT NSW 2009

61 2 95160722 Telephone Facsimile

andrew.ibrahim@eiaustralia.com.au Email

E25077 Hughes, Waratah, Wharf Melrose Pk

Project E25077 Order Number Samples 36

Telephone (Not specified) Facsimile Fmail

Huong Crawford

+61 2 8594 0400

+61 2 8594 0499

Fri 23/4/2021

Unit 16, 33 Maddox St

Alexandria NSW 2015

SGS Alexandria Environmental

au.environmental.sydney@sgs.com

Report Due Mon 3/5/2021 SE218964 SGS Reference

Samples Received

SUBMISSION DETAILS

This is to confirm that 36 samples were received on Friday 23/4/2021. Results are expected to be ready by COB Monday 3/5/2021. Please quote SGS reference SE218964 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled Sample container provider Samples received in correct containers

Date documentation received Samples received in good order Sample temperature upon receipt

Turnaround time requested

Yes SGS Yes

26/4/2021@3:35pm

Yes 10.0C Standard Complete documentation received

Sample cooling method Sample counts by matrix

Type of documentation received Samples received without headspace Sufficient sample for analysis

Yes Ice Bricks 35 Soil, 1 water COC

Yes Yes

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. 36 Soil and 1 Water samples have been placed on hold as no tests have been assigned for them by the client . These samples will not be processed.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

SGS Australia Pty Ltd ABN 44 000 964 278

Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia

t +61 2 8594 0400 f +61 2 8594 0499



CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 Hughes, Waratah, Wharf Melrose Pk

- SUMMARY OF ANALYSIS -

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	30-BH110M_2.2-2.3	-	-	26	-	7	10	11	7
002	30-BH111M_0.2-0.3	-	-	26	-	7	10	11	7
003	30-BH117_0.2-0.3	-	-	26	-	7	10	11	7
004	112-BH101_0.3-0.4	-	-	26	-	7	10	11	7
005	112-BH102_0.4-0.5	29	14	26	11	7	10	11	7
006	112-BH103_0.2-0.3	-	-	26	-	7	10	11	7
007	112-BH104_0.2-0.3	29	14	26	11	7	10	11	7
008	112-BH105_0.2-0.3	29	14	26	11	7	10	11	7
009	112-BH106M_0.2-0.3	29	14	26	11	7	10	11	7
010	112-BH106M_1.4-1.5	-	-	26	-	7	10	11	7
011	112-BH107_0.2-0.3	29	14	26	11	7	10	11	7
012	112-BH108_0.2-0.3	-	-	26	-	7	10	11	7
013	112-BH108_0.7-0.8	-	-	26	-	7	10	11	7
014	112-BH109_0.3-0.4	29	14	26	11	7	10	11	7
015	112-BH109_0.7-0.8	-	-	26	-	7	10	11	7
016	112-BH110M_0.2-0.3	29	14	26	11	7	10	11	7
017	112-BH111_0.2-0.3	-	-	26	-	7	10	11	7
018	112-BH111_0.6-0.7	-	-	26	-	7	10	11	7
019	112-BH112M_0.4-0.5	29	14	26	11	7	10	11	7
020	112-BH113M_0.2-0.3	29	14	26	11	7	10	11	7
021	32-BH101_0.1-0.2	29	14	26	11	7	10	11	7
022	32-BH102_0.2-0.3	29	14	26	11	7	10	11	7
023	2-BH103_0.3-0.4	29	14	26	11	7	10	11	7
024	2-BH103_0.9-1.0	-	-	26	-	7	10	11	7

_ CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .



_ CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 Hughes, Waratah, Wharf Melrose Pk

- SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	32-BH104M_0.2-0.3	29	14	26	11	7	10	11	7
026	32-BH105_0.2-0.3	29	14	26	11	7	10	11	7
027	32-BH106_0.2-0.3	-	-	26	-	7	10	11	7
028	32-BH106_1.4-1.5	-	-	26	-	7	10	11	7
029	32-BH107M_0.2-0.3	29	14	26	11	7	10	11	7
030	QD1	-	-	26	-	7	10	11	7
031	QD2	-	-	26	-	7	10	11	7
032	QD3	-	-	26	-	7	10	11	7
033	QD4	-	-	26	-	7	10	11	7
035	QTB1	-	-	-	-	-	-	11	-
036	QTS1	-	-	-	-	-	-	11	-

_ CONTINUED OVERLEAF



CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 Hughes, Waratah, Wharf Melrose Pk

- SUMMARY OF ANALYSIS -

		Fibre Identification in soil	Mercury in Soil	Moisture Content	Per- and Polyfluoroalkyl Substances (PFAS) in
No.	Sample ID	Fibre	Mercu	Moist	Per- a Subst
001	30-BH110M_2.2-2.3	2	1	1	-
002	30-BH111M_0.2-0.3	2	1	1	-
003	30-BH117_0.2-0.3	2	1	1	-
004	112-BH101_0.3-0.4	2	1	1	-
005	112-BH102_0.4-0.5	2	1	1	55
006	112-BH103_0.2-0.3	2	1	1	-
007	112-BH104_0.2-0.3	2	1	1	-
008	112-BH105_0.2-0.3	2	1	1	55
009	112-BH106M_0.2-0.3	2	1	1	55
010	112-BH106M_1.4-1.5	2	1	1	-
011	112-BH107_0.2-0.3	2	1	1	-
012	112-BH108_0.2-0.3	2	1	1	-
013	112-BH108_0.7-0.8	2	1	1	-
014	112-BH109_0.3-0.4	2	1	1	55
015	112-BH109_0.7-0.8	2	1	1	-
016	112-BH110M_0.2-0.3	2	1	1	-
017	112-BH111_0.2-0.3	2	1	1	-
018	112-BH111_0.6-0.7	2	1	1	-
019	112-BH112M_0.4-0.5	2	1	1	55
020	112-BH113M_0.2-0.3	2	1	1	55
021	32-BH101_0.1-0.2	2	1	1	55
022	32-BH102_0.2-0.3	2	1	1	-
023	2-BH103_0.3-0.4	2	1	1	-
024	2-BH103_0.9-1.0	2	1	1	-

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The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

27/04/2021 Page 4 of 6

The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .



_ CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 Hughes, Waratah, Wharf Melrose Pk

- SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content	Per- and Polyfluoroalkyl Substances (PFAS) in
025	32-BH104M_0.2-0.3	2	1	1	55
026	32-BH105_0.2-0.3	2	1	1	-
027	32-BH106_0.2-0.3	2	1	1	-
028	32-BH106_1.4-1.5	2	1	1	-
029	32-BH107M_0.2-0.3	2	1	1	55
030	QD1	-	1	1	-
031	QD2	-	1	1	-
032	QD3	-	1	1	-
033	QD4	-	1	1	-
035	QTB1	-	-	1	-

_ CONTINUED OVERLEAF





- CLIENT DETAILS			
Client EI AUSTRALIA	Project	E25077 Hughes,Waratah,Wharf Melrose Pk	
			/

SUMMARY	OF ANALYSIS —					
		ry (dissolved) in	Metals (Dissolved) er by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	in Water	Volatile Petroleum Hydrocarbons in Water
No.	Sample ID	Mercury Water	Trace Me in Water I	TRH (1 Hydroc	VOCs	Volatile Hydroca
034	QR1	1	7	9	11	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .

27/04/2021 Page 6 of 6





CLIENT DETAILS

LABORATORY DETAILS

Andrew Ibrahim Contact

EI AUSTRALIA Client Address

SUITE 6.01 55 MILLER STREET

PYRMONT NSW 2009

61 2 95160722

Telephone (Not specified) Facsimile

andrew.ibrahim@eiaustralia.com.au Email

E25077 Hughes, Waratah, Wharf Melrose Pk Project E25077

Order Number Samples 29

Huong Crawford Manager SGS Alexandria Environmental Laboratory

Address Unit 16, 33 Maddox St

Alexandria NSW 2015

+61 2 8594 0400

Telephone +61 2 8594 0499 Facsimile

au.environmental.sydney@sgs.com Fmail

Samples Received Fri 7/5/2021

Report Due Mon 10/5/2021 SE218963A SGS Reference

SUBMISSION DETAILS

This is to confirm that 29 samples were received on Friday 7/5/2021. Results are expected to be ready by COB Monday 10/5/2021. Please quote SGS reference SE218963A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Yes

SGS

Yes

Yes

10.0°C

Next Day

7/5/2021@4:09pm

Samples clearly labelled Sample container provider Samples received in correct containers Date documentation received Samples received in good order

Sample temperature upon receipt Turnaround time requested

Complete documentation received

Yes Ice Bricks Sample cooling method Sample counts by matrix 4 Soil Type of documentation received **Fmail** Samples received without headspace N/A Sufficient sample for analysis Yes

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS -

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SGS Australia Pty Ltd ABN 44 000 964 278

Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia t +61 2 8594 0400 f +61 2 8594 0499





CLIENT DETAILS -Client El AUSTRALIA Project E25077 Hughes, Waratah, Wharf Melrose Pk

- SUMMARY OF ANALYSIS

No.	Sample ID	Metals in TCLP Extract by ICPOES	PAH (Polynuclear Aromatic Hydrocarbons) in TCLP	TCLP (Toxicity Characteristic Leaching	TCLP (Toxicity Characteristic Leaching
005	30-BH101_4.4-4.5	2	-	6	-
012	30-BH104_0.4-0.5	-	4	-	6
017	30-BH106M_1.1-1.2	1	-	6	-
019	30-BH106M_3.4-3.5	1	-	6	-

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

7/05/2021 Page 2 of 2

The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .





Manager

CLIENT DETAILS

LABORATORY DETAILS

Andrew Ibrahim Contact

EI AUSTRALIA Client Address

SUITE 6.01 55 MILLER STREET

PYRMONT NSW 2009

61 2 95160722

Telephone (Not specified) Facsimile

andrew.ibrahim@eiaustralia.com.au Email

E25077 Hughes, Waratah, Wharf Melrose Pk

E25077 Order Number Samples 29

Project

Laboratory Address

Huong Crawford SGS Alexandria Environmental

Unit 16, 33 Maddox St

Alexandria NSW 2015

Telephone +61 2 8594 0400

+61 2 8594 0499 Facsimile

au.environmental.sydney@sgs.com Fmail

Samples Received Mon 10/5/2021

Report Due Tue 11/5/2021 SE218963ARE SGS Reference

SUBMISSION DETAILS

This is to confirm that 29 samples were received on Monday 10/5/2021. Results are expected to be ready by COB Tuesday 11/5/2021. Please quote SGS reference SE218963ARE when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled Complete documentation received Yes Yes Sample container provider SGS Ice Bricks Sample cooling method Samples received in correct containers Yes Sample counts by matrix 4 Soil 10/5/2021 Date documentation received Type of documentation received **Fmail** Samples received in good order Yes Samples received without headspace N/A 10.0°C Sample temperature upon receipt Sufficient sample for analysis Yes Turnaround time requested Next Day

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS -

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SGS Australia Pty Ltd ABN 44 000 964 278

Environment, Health and Safety

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CLIENT DETAILS -Client El AUSTRALIA Project E25077 Hughes, Waratah, Wharf Melrose Pk

- SUMMARY OF ANALYSIS

No.	Sample ID	Metals in TCLP Extract by ICPOES	PAH (Polynuclear Aromatic Hydrocarbons) in TCLP	TCLP (Toxicity Characteristic Leaching	TCLP (Toxicity Characteristic Leaching
005	30-BH101_4.4-4.5	2	-	6	-
012	30-BH104_0.4-0.5	-	4	-	6
017	30-BH106M_1.1-1.2	1	-	6	-
019	30-BH106M_3.4-3.5	1	-	6	-

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

10/05/2021 Page 2 of 2

The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .





CLIENT DETAILS

LABORATORY DETAILS

Andrew Ibrahim Contact

EI AUSTRALIA Client Address

SUITE 6.01 55 MILLER STREET

PYRMONT NSW 2009

61 2 95160722 Telephone (Not specified) Facsimile

andrew.ibrahim@eiaustralia.com.au Email

E25077 Hughes, Waratah, Wharf Melrose Pk Project E25077 Order Number

Samples 36

Huong Crawford Manager

SGS Alexandria Environmental Laboratory

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Alexandria NSW 2015

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+61 2 8594 0499 Facsimile

au.environmental.sydney@sgs.com Fmail

Samples Received Fri 7/5/2021

Report Due Mon 10/5/2021 SE218964A SGS Reference

SUBMISSION DETAILS

This is to confirm that 36 samples were received on Friday 7/5/2021. Results are expected to be ready by COB Monday 10/5/2021. Please quote SGS reference SE218964A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Yes

SGS

Yes

Yes

10.0C

Next Day

7/5/2021@4:10pm

Samples clearly labelled Sample container provider Samples received in correct containers Date documentation received

Samples received in good order Sample temperature upon receipt Turnaround time requested

Complete documentation received

Yes Ice Bricks Sample cooling method Sample counts by matrix 5 Soil Type of documentation received Email Samples received without headspace Yes Sufficient sample for analysis Yes

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS -

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Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia t +61 2 8594 0400 f +61 2 8594 0499





CLIENT DETAILS

Client El AUSTRALIA Project E25077 Hughes, Waratah, Wharf Melrose Pk

SHMMARY	OF ANALYSIS —		
OOMMATT	OI AIVALI OIO		
No.	Sample ID	Metals in TCLP Extract by ICPOES	TCLP (Toxicity Characteristic Leaching
005	112-BH102_0.4-0.5	1	6
007	112-BH104_0.2-0.3	1	6

_ CONTINUED OVERLEAF





Client El AUSTRALIA Project E25077 Hughes,Waratah,Wharf Melrose Pk

- SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in TCLP Extract	Metals in TCLP Extract by ICPOES	TCLP (Toxicity Characteristic Leaching
026	32-BH105_0.2-0.3	-	1	6
027	32-BH106_0.2-0.3	1	-	6
033	QD4	-	1	6

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

7/05/2021 Page 3 of 3

The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .

Sheet Site: 82-BH102M-54-55 J = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass bottle P = natural HDPE plastic bottle 30-BHILM-69-20 30-BHILDM_70-21 30-BH106M-63-64 Wharf Rd, Melrose Park 82 Hughes Ave, Ermington, 30-32 Waratah St and 112 E25077 ZLB = Zip-Lock Bag VC = glass vial, Tefton Septum Container Type: る一里回 _aboratory: Sample ID 으 69-70 SGS Australia Unit 16, 33 Maddox Street Laboratory ID P: 02 8594 0400 F: 02 8594 0499 **ALEXANDRIA NSW 2015** w 2×248 Container Type Suite 6.01, 55 Miller Street, PYRMONT NSW 2009 lab@eiaustralia.com.au 21/4/2 20(4/21 Ph: 9516 0722 Date Sampling Project No: 3 Time Sample Matrix WATER IMPORTANT: Please e-mail laboratory results to: lab@eiaustralia.com.au Sampler's Name (EI): Х Date Signature SOIL Investigator: I attest that these samples were collected in accordance with OTHER isel 23/04/202 Andrew Schmidt HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos standard El field sampling procedures. HM A /TRH/BTEX/PAHs HM A /TRH/BTEX BTEX Received by (SGS): Print Date Signature **VOCs** シートス Asbestos Asbestos Quantification pH / CEC (cation exchange) Analysis 2.5 SGS EHS Sydney COC SE218931 pH / EC (electrical conductivity) **Dewatering Suite** Please cc: Andrew.lbrahim@eiaustralia.com.au Sampler's Comments: **sPOCAS** Report with El Waste Classification Table **PFAS** Sulphates pH/pH Peroxide 6 TCLP HM A/ / PAH Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4) Dewatering Suite pH & EC TDS / TDU Arsenic Cadmium Chromium Copper Mercury Nickel Mercury Nickel Zinc HM ⁸ Arsenic Cadmium Total Cyanide Hardness Lead Lead A WH TURNAROUND Chromium LABORATORY **▲** 48 Hours Comments Other_ Standard 72 Hours 24 Hours





CLIENT DETAILS

LABORATORY DETAILS

Contact Andrew Ibrahim

Client EI AUSTRALIA Address SUITE 6.01

55 MILLER STREET

PYRMONT NSW 2009

Telephone 61 2 95160722 Facsimile (Not specified)

Email andrew.ibrahim@eiaustralia.com.au

Project E25077 Hughes, Waratah, Wharf Melrose Pk

Order Number **E25077**Samples 5

Manager Huong Crawford

Laboratory SGS Alexandria Environmental

Address Unit 16, 33 Maddox St

Alexandria NSW 2015

Yes

5 Soil

COC

N/A

Yes

Ice Bricks

Telephone +61 2 8594 0400

Facsimile +61 2 8594 0499

Email au.environmental.sydney@sgs.com

Samples Received Fri 23/4/2021
Report Due Tue 27/4/2021

SGS Reference SE218931

SUBMISSION DETAILS

This is to confirm that 5 samples were received on Friday 23/4/2021. Results are expected to be ready by COB Tuesday 27/4/2021. Please quote SGS reference SE218931 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled Complete documentation received Yes Sample container provider Client Sample cooling method Samples received in correct containers Yes Sample counts by matrix 23/4/2021 Date documentation received Type of documentation received Samples received in good order Yes Samples received without headspace Sample temperature upon receipt 2°C Sufficient sample for analysis Turnaround time requested Two Days

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS -

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SGS Australia Pty Ltd ABN 44 000 964 278 Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia t +61 2 8594 0400 f +61 2 8594 0499





CLIENT DETAILS _ Client El AUSTRALIA Project E25077 Hughes, Waratah, Wharf Melrose Pk

VANAMID	OF ANALYSIS —	
No.	Sample ID	Field pH for Acid Sulphate Soil
001	30-BH101_6.9-7.0	4
002	82-BH102M_5.4-5.5	4
003	30-BH106M_6.3-6.4	4
004	30-BH110M_7.0-7.1	4
005	30-BH111M_6.9-7.0	4

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Testing as per this table shall commence immediately unless the client intervenes with a correction .

26/04/2021 Page 2 of 2

Yin, Emily (Sydney)

From:

Andrew Ibrahim - ElAustralia < andrew.ibrahim@eiaustralia.com.au>

Sent:

Wednesday, 28 April 2021 1:04 PM

To:

AU.SampleReceipt.Sydney (Sydney); AU.Environmental.Sydney (Sydney)

Subject:

[EXTERNAL] RE: Report Job SE218931, your reference E25077 Hughes, Waratah,

Wharf Melrose Pk, order number E25077

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Hi SGS team,

Please test the following samples for SPOCAS on standard TAT:

30-BH101_6.9-7.0

82-BH102M_5.4-5.5

30-BH106M 6.3-6.4

30-BH110M_7.0-7.1

SGS EHS Alexandria Laboratory

Received: 28 - Apr - 2021

Thank you.

Kind regards,

Andrew Ibrahim

MEng. (Env), BEng. (Che)

Chemical / Environmental Engineer

T 02 9516 0722 M 0451224922

E andrew.ibrahim@eiaustralia.com.au

Suite 6.01, 55 Miller Street Pyrmont, NSW 2009

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From: AU.Samplereceipt.Sydney@SGS.com [mailto:AU.Samplereceipt.Sydney@SGS.com]

Sent: Tuesday, 27 April 2021 12:20 PM

To: Andrew Ibrahim - EIAustralia; Andrew Schmidt - EIAustralia; Laboratory Results - EIAustralia

Subject: Report Job SE218931, your reference E25077 Hughes, Waratah, Wharf Melrose Pk, order number E25077

Dear Valued Customer,

Please find attached the report for SGS job SE218931, your reference E25077 Hughes, Waratah, Wharf Melrose Pk, order number E25077.





Manager

Address

Laboratory

CLIENT DETAILS

Telephone

LABORATORY DETAILS

Andrew Ibrahim Contact

EI AUSTRALIA Client Address

SUITE 6.01 55 MILLER STREET

PYRMONT NSW 2009

61 2 95160722

(Not specified) Facsimile

andrew.ibrahim@eiaustralia.com.au Email

E25077 Hughes, Waratah, Wharf Melrose Pk Project

E25077 Order Number Samples 5

+61 2 8594 0400 Telephone

+61 2 8594 0499 Facsimile

au.environmental.sydney@sgs.com Fmail

Wed 28/4/2021

Huong Crawford

Unit 16, 33 Maddox St

Alexandria NSW 2015

SGS Alexandria Environmental

Samples Received Report Due Thu 6/5/2021 SE218931A SGS Reference

SUBMISSION DETAILS

This is to confirm that 5 samples were received on Wednesday 28/4/2021. Results are expected to be ready by COB Thursday 6/5/2021. Please quote SGS reference SE218931A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled Complete documentation received Yes Yes Sample container provider Ice Bricks Client Sample cooling method Samples received in correct containers Sample counts by matrix 4 Soil Yes 28/4/2021@1:04pm Date documentation received Type of documentation received COC Samples received in good order Yes Samples received without headspace N/A Sample temperature upon receipt 2°C Sufficient sample for analysis Yes Turnaround time requested Standard

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

SPOCAS subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. Repoprt Number CE152374

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CLIENT DETAILS -Client El AUSTRALIA Project E25077 Hughes, Waratah, Wharf Melrose Pk

- SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content	SPOCAS Net Acidity Calculations	TAA (Titratable Actual Acidity)	TPA (Titratable Peroxide Acidity)
001	30-BH101_6.9-7.0	1	6	7	21
002	82-BH102M_5.4-5.5	1	6	7	21
003	30-BH106M_6.3-6.4	1	6	7	21
004	30-BH110M_7.0-7.1	1	6	7	21

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document. The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction .

30/04/2021 Page 2 of 2

Sheet L of Z						San	nple M	latrix								Ana	lysis								Comments
Site:				Proj	ect No:																				HM ^a Arsenic
82 Hughes Ave,			, 112	E25	077												3								Cadmium
Wharf Rd, Melro	ose Park	NSW							w	S						nge)	conductivity)						2		Copper
Laboratory:	SGS Austra	alia							TEX/PAHs Asbestos	PAH					ation	exchange)	cond						Dioxam		Mercury Nickel
		Maddox Str RIA NSW 20							TEX/	TEX/	TEX				intific	(cation e	rical	nite					10	A/PAH	Zinc
		0400 F: 02 8		9					/TRH/BTEX/PAHS DP/PCB/Asbestos	/TRH/BTEX/PAHs	/TRH/BTEX				Qua		EC (electrical	ng Si			40		9	I A I	HM ^B Arsenic
Sample	Laboratory	Container		Sampli	ng	WATER	_	OTHER	4 %	A /T	<	×	S	Asbestos	Asbestos Quantification	CEC	EC (Dewatering Suite	sPOCAS	SI	Sulphates	Chlorides	7	P HM	Cadmium Chromium
ID	ID	Туре	Da	ate	Time	××	SOIL	TO	HM	HMA	Ξ	втех	VOCs	Asb	Asb	/Hd	/Hd	Dev	sPC	PFAS	Sulp	Chlo	-	TCLP	Lead Mercury
CW-82-84(02M-1	l	S, P,	30/4	21	anpon	1/-				X			X										X		Nickel Dewatering Suite
W-Ei-MWOI-1	2	-	-		-	4																			pH & EC TDS / TDU Hardness
Ciw-Ei-MWO3-1	3					Щ																			Total Cyanide Metals (Al, As, Cd, Cr,
CW-30-BH1024-1	4					Ш																			Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4) BTEX
6W-30-BH106M-1	5					Ш																			PAH
GW-30-BHIRM-1	6					Ш																			LABORATORY TURNAROUND
CW-30-BHILM-1	7																								Standard
aw-112-84113M-1	8	1								1			V	1		EHS :	-	-					V		24 Hours
GW-QDI	. 9	5,8,2202									X				5 E	21	91	96							48 Hours
aw-ar1	10	5,8,22									X		_												72 Hours
aw-arbi		1	1	_	1																				Other
CW-OTBI	1	VC	Labo	Prep	red	1						X													
Container Type: J = solvent washed, acid r	insed, Tefton s	ealed glass jar					Inv	estiga	tor: I att					e colle		accord	ance v	vith		Repo	rt with	El Was	te Clas	sification	on Table
S = solvent washed, acid P = natural HDPE plastic I		tlle					Samp	ler's Na	me (EI):	Otorro		noid od		ved by (Samp	ler's Co	ommei	nts:			
VC = glass vial, Tefton Se ZLB = Zip-Lock Bag	ptum						Print		Andre	w Sch	midt		Print							se cc:					
		-		4 55 1	I'll Ot	- 4	Sign	ature	121		11		Sign	3008 ature	Ude	5/			•			m@e	eiaust	ralia.	com.au
1		5			Miller Stre SW 2009			-	1.Sel		<u></u>		-												
a i a u a t	lin			9516			Date		3/05/	-			Date	3.5.	21	3	:20	9							
Contamination Remedia	ralia	1	ab@eia	austral	ia.com.a	au			ANT			1-1-6													
			COC Mar	rch 2018 FO	RM v.4 - SGS	-	Please	e e-mai	il labora	itory re	sults to	: lab(yelat	ıstrali	a.cor	n.au									

E-MAILED 45-21 10:06AM

Sheet 2 of 2						nple N	/latrix	Analysis											Comments											
Site: Project No: 82 Hughes Ave, 30-32 Waratah St, 112 Wharf Rd, Melrose Park NSW Project No: E25077		:										(ebu	activity)								HM A Arsenic Cadmium Chromium Copper									
Laboratory:	Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015		Unit 16, 33 Maddox Street,		it 16, 33 Maddox Street, EXANDRIA NSW 2015		addox Street, A NSW 2015		Maddox Street, A NSW 2015					HM A /TRH/BTEX/PAHS OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX				Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite						I A / PAH	Lead Mercury Nickel Zinc HM [®] Arsenic
Sample	Laboratory	Container		Sampling	WATER		OTHER	A /TF	A TTF	A /TF	×	S	Asbestos	estos	/ CEC	EC (e	vaterii	sPOCAS	S	Sulphates	Chlorides		P HM	Cadmium Chromium						
ID	ID	Туре	Da	te Time	W A	SOIL	10	₩ O	Ξ	Ξ	BTEX	VOCs	Asb	Asb	Hd	Hd Hd	Dew	sPO	PFAS	Sulp	Chlo		TCLP	Lead Mercury						
CW-QTS i	12	VC	Lab	Prepared							X													Nickel Dewatering Suite pH & EC TDS / TDU Hardness Total (2yanide Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4) BTEX PAH LABORATORY TURNAROUND						
																								Standard 24 Hours 48 Hours 72 Hours Other						
Container Type: J = solvent washed, acid rinsed, Tefton sealed glass jar S = solvent washed, acid rinsed glass bottle P = natural HDPE plastic bottle VC = glass vial, Tefton Septum ZLB = Zip-Lock Bag Suite 6.01, 55 Miller PYRMONT NSW 2 Ph: 9516 0722 lab@eiaustralia.coc COC March 2018 FORM v.4 -						Samp Print Sign Date	pature	Andre 3/05/ ANT	stand	midt	field sa	Receir Print M. Sign.	Soverature	dures. (SGS):	3		vith	Plea	ler's C	ommei	nts:			com.au						





CLIENT DETAILS

LABORATORY DETAILS

Contact Andrew Schmidt

Client EI AUSTRALIA
Address SUITE 6.01

SUITE 6.01

PYRMONT NSW 2009

61 2 95160722

Telephone 61 2 95160722 Facsimile (Not specified)

Email andrew.schmidt@eiaustralia.com.au

Project E25077 82 Hughes Ave, 30-32 Waratah St,

Order Number **E25077**Samples 12

Manager Huong Crawford

Laboratory SGS Alexandria Environmental

Address Unit 16, 33 Maddox St

Alexandria NSW 2015

Telephone +61 2 8594 0400

Facsimile +61 2 8594 0499

Email au.environmental.sydney@sgs.com

Samples Received Mon 3/5/2021
Report Due Mon 10/5/2021
SGS Reference SE219196

SUBMISSION DETAILS

This is to confirm that 12 samples were received on Monday 3/5/2021. Results are expected to be ready by COB Monday 10/5/2021. Please quote SGS reference SE219196 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled Complete documentation received Yes Yes Sample container provider SGS Ice Bricks Sample cooling method Samples received in correct containers Sample counts by matrix 12 Water Yes 4/5/2021@10:06am Date documentation received Type of documentation received COC Samples received in good order Yes Samples received without headspace Yes 10.0°C Sample temperature upon receipt Sufficient sample for analysis Yes Turnaround time requested Standard

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

1,4-Dioxan subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

SGS Australia Pty Ltd ABN 44 000 964 278 Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia t +61 2 8594 0400 f +61 2 8594 0499



_ CLIENT DETAILS _

Client El AUSTRALIA

Project E25077 82 Hughes Ave, 30-32 Waratah St,

- SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	GW-82_BH102M-1	1	22	7	9	78	7
002	GW-Ei_MW01-1	1	22	7	9	78	7
003	GW-Ei_MW03-1	1	22	7	9	78	7
004	GW-30_BH102M-1	1	22	7	9	78	7
005	GW-30_BH106M-1	1	22	7	9	78	7
006	GW-30_BH110M-1	1	22	7	9	78	7
007	GW-30_BH111M-1	1	22	7	9	78	7
008	GW-112_BH113M-1	1	22	7	9	78	7
009	GW_QD1	1	-	7	9	11	7
010	GW_QR1	1	-	7	9	11	7
011	GW_QTB1	-	-	-	-	11	-
012	GW_QTS1	-	-	-	-	11	-

_ CONTINUED OVERLEAF





SAMPLE RECEIPT ADVICE

CLIENT DETAILS _ Client El AUSTRALIA Project E25077 82 Hughes Ave, 30-32 Waratah St,

SUMMARY	OF ANALYSIS —	
No.	Sample ID	USEPA 8260B Additional VOCs in water
001	GW-82_BH102M-1	1
002	GW-Ei_MW01-1	1
003	GW-Ei_MW03-1	1
004	GW-30_BH102M-1	1
005	GW-30_BH106M-1	1
006	GW-30_BH110M-1	1
007	GW-30_BH111M-1	1
008	GW-112_BH113M-1	1

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document. The numbers shown in the table indicate the number of results requested in each package. Please indicate as soon as possible should your request differ from these details.

4/05/2021 Page 3 of 3

Testing as per this table shall commence immediately unless the client intervenes with a correction .

Sheet \ of_				S	Sample Matrix	e Ma	Tr.								Ana	Analysis								\neg	Comments
Site:			Project No:	<u>6</u>				_	_	_	_					′)								Ŧ	MM △
82 Hughes Ave, 30-32 Waratah St, 112 Wharf Rd, Melrose Park NSW	30-32 Waratah se Park NSW	St, 112	E25077	7		4 3			s					1	inge)	luctivity									Arsenic Cadmium Chromium Conner
	Eurofins Enviro	nment Tes	ting Aust. F	Ĕ										catio	exch	I con		•					1	_	Lead Mercury
Laboratory:	Eurofins Environment Testing Aust. P/L 6 / 16 Mars Road, Lane Cove NSW 2066 P: 02 9900 8400	nment Tes d, 066	ting Aust. F) <u>/</u>			i.e. Fibro, Pai	RH/BTEX/ P/PCB/Asbe	RH/BTEX/F	RH/BTEX			S	s Quantifica	C (cation ex	(electrical o	ing Suite	3					M ^B /PAH		Nickel Zinc Ansenic
	Laboratory Container	Jer	Sampling								EX	Cs	esto	esto	CE	EC	vater	CAS	\S				P H		Cadmium Chromium
10		Date	ite Time		WAT	SOIL			_		ВТЕ	VO	Ast	Ast	рН.	рН.	Dev	sPC	PF/				TCL		Lead Mercury
CM-82-BHIDZM-1	P	30/4/21	121 cmp	_	Х													6	\times					g z	Nickel Dewatering Suite
(Jul-Ec-Musi-1																								표검질	TDS / Turbidity NTU Hardness
aw-Ec-MW3-1																								\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	Total Cyanide Metals (Al, As, Cd, Cr,
(m)-30-8H1024-1				-		-	-	-																四月日	TRH (F1, F2, F3, F4) BTEX
(JU-30-8H106AH						-	-		_	-														PAH Total	PAH Total Phenoi
CW-30-BHILDM-1				-		-	-	-	-	-														75	LABORATORY TURNAROUND
1-WIIIH8-05-00				-		-	-				-												-		Standard
CW-32-BHID4M-				-		-	-				-														24 Hours
Cw-112-8Hirm-1	+	-	<u></u>		-		-			-									<						48 Hours
3				-			-		-									el .							72 Hours
Container Type:					-	,																			
Container Type: J= solvent washed, acid rinsed,Teflon sealed, glass jar S= solvent washed, acid rinsed glass bottle P= natural HNDE plactic bottle	insed,Teflon sealed rinsed glass bottle	, glass jar			5	vestig	Investigator: I attest that these samples we with standard EI field sampling	I attest that these samples we with standard EI field sampling	that t	hese d El fi	samp eld sa	les wa	g pro	re collected in procedures.		accordance	ance	-71	Report	with t	∃i Wa:	ste Cla	Report with El Waste Classification Table	ition T	able
VC= glass vial, Tefton Septum ZLB = Zip-Lock Bag	plum				Ñ	ampler's	Sampler's Name (EI):	(E):			_	Received by (Eurofins):	ed by (Eurofii	18):			Sam	ipler's	Com	Sampler's Comments:	(2)			
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Environment Testing

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Sydney Unit F3. Building F

NATA # 1261 Site # 18217

NATA # 1261 Site # 40017 in smallwood Place Murarrie QLD 4172 Phone: +61 7 3902 4600 NATA # 1261 Site # 40017 1/21 Smallwood Place NATA # 1261 Site # 20794 46-48 Banksia Road Welshpool WA 6106 Phone: +61 8 9251 9600 Site # 23736

Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 Phone: +61 2 4968 8448 NATA # 1261 Site # 25079 Auckland 35 O'Rorke Road Penrose, Auckland 1061 Phone: +64 9 526 45 51 IANZ # 1327

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

Sample Receipt Advice

Company name: Contact name: Project name:

El Australia Andrew Ibrahim Not provided

Project ID: Turnaround time:

E25077 5 Day

Date/Time received

May 7, 2021 9:30 AM

Eurofins reference 793536

Sample Information

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

Notes

Contact

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

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

Results will be delivered electronically via email to Andrew Ibrahim - andrew.ibrahim@eiaustralia.com.au.



Sheet \ of_				S	Sample Matrix	e Ma	Tr.								Ana	Analysis								\neg	Comments
Site:			Project No:	<u>6</u>				_	_	_	_					′)								Ŧ	MM △
82 Hughes Ave, 30-32 Waratah St, 112 Wharf Rd, Melrose Park NSW	30-32 Waratah se Park NSW	St, 112	E25077	7		4 3			s					1	inge)	luctivity									Arsenic Cadmium Chromium Conner
	Eurofins Enviro	nment Tes	ting Aust. F	Ĕ										catio	exch	I con		•					1	_	Lead Mercury
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	Laboratory Container	Jer	Sampling								EX	Cs	esto	esto	CE	EC	vater	CAS	\S				P H		Cadmium Chromium
10		Date	ite Time		WAT	SOIL			_		ВТЕ	VO	Ast	Ast	рН.	рН.	Dev	sPC	PF/				TCL		Lead Mercury
CM-82-BHIDZM-1	P	30/4/21	121 cmp	_	Х													6	\times					g z	Nickel Dewatering Suite
(Jul-Ec-Musi-1																								표검질	TDS / Turbidity NTU Hardness
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(m)-30-8H1024-1				-		-	-	-																四月日	TRH (F1, F2, F3, F4) BTEX
(JU-30-8H106AH						-	-		_	-														PAH Total	PAH Total Phenoi
CW-30-BHILDM-1				-		-	-	-	-	-														75	LABORATORY TURNAROUND
1-WIIIH8-05-00				-		-	-				-												-		Standard
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Cw-112-8Hirm-1	+	-	<u></u>		-		-			-									<						48 Hours
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VC= glass vial, Tefton Septum ZLB = Zip-Lock Bag	plum				Ñ	ampler's	Sampler's Name (EI):	(E):			_	Received by (Eurofins):	ed by (Eurofii	18):			Sam	ipler's	Com	Sampler's Comments:	(2)			
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El Australia Andrew Ibrahim Not provided

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Laboratory:	12 Ashi CHATS	ab Services ley Street, WOOD NS\ 910 6200					OTHERS (i.e. Fibro, Paint, etc.)	HM A /TRH/BTEX/PAHS OCP/OP/PCB/Asbestos	/TRH/BTEX/PAHs	/TRH/BTEX			SO	Asbestos Quantification	cation	pH / EC (electrical conductivity)	Dewatering Suite	. 51					HMB/PAH	Mercury Nickel Zinc HMB Arsenic Cadmium
Sample ID	Laboratory ID	Container Type	Sa Date	Impling Time	WATER	SOIL	OTHERS	HIM A OCP/C	HM A /	HM A /	втех	VOCs	Asbestos	Asbest	pH/CEC(pH / E(Dewate	sPOCAS	PFAS				TCLP	Chromium Lead Mercury
QTI	1	2	20/4/2	i amp	,	×			X															Nickel Dewatering Suite
QT2	2		22/4/	21 00/00					X							-								pH & EC TDS / Turbidity NTU Hardness
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J= solvent washed, aci S= solvent washed, aci P= natural HDPE plasti	id rinsed gla		ss jar			Inves	stigato		est tha stand							ccord	ance	• R	Report	with E	l Waste	e Clas	sificati	on Table
VC= glass vial, Teflon : ZLB = Zip-Lock Bag						Samp <i>Prir</i>	ıt	ame (El				Recei Prin	ived by	<u> </u>				Sam	pler's	Comn	nents:			
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Site: 82 Hughes Ave Wharf Rd, Mel			112	Project No: E25077			Paint, etc.)	AHs tos	чНs					ion	exchange)	onductivity)		•						HM A Arsenic Cadmium Chromium Copper Lead
Laboratory:	12 Ashl CHATS	ab Services ley Street, WOOD NS\ 910 6200		` 27			Fibro,	HM ^A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM ^A /TRH/BTEX/PAHs	HM A /TRH/BTEX	3		ŝo	os Quantification	cation	pH / EC (electrical conductivity)	ering Suite	48				•	HM ^B /PAH	Mercury Nickel Zinc HM ^B Arsenic Cadmium
Sample ID	Laboratory ID	Container Type	Sa Date	mpling Time	WATER	SOIL	OTHERS (i.e.	HMA/	HM A.	HM A /	втех	VOCs	Asbestos	Asbestos	pH / CEC (pH / E(Dewatering	sPOČAS	PFAS				TCLP	Chromium Lead Mercury
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Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details	
Client	El Australia
Attention	Lab Email

Sample Login Details	
Your reference	E25077, Melrose Park
Envirolab Reference	268247
Date Sample Received	04/05/2021
Date Instructions Received	04/05/2021
Date Results Expected to be Reported	11/05/2021

Sample Condition	
Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	16.0
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments
Nil

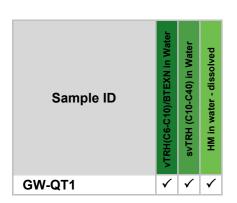
Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



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The '\sqrt{'} indicates the testing you have requested. THIS IS NOT A REPORT OF THE RESULTS.

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.





ANALYTICAL REPORT





CLIENT DETAILS -

LABORATORY DETAILS

Andrew Ibrahim EI AUSTRALIA

Client Address **SUITE 6.01**

> 55 MILLER STREET **PYRMONT NSW 2009**

61 2 95160722 Telephone (Not specified) Facsimile

andrew.ibrahim@eiaustralia.com.au Email

E25077 Hughes, Waratah, Wharf Melrose Pk Project

E25077 Order Number

29 Samples

Huong Crawford Manager

SGS Alexandria Environmental Laboratory

Address Unit 16, 33 Maddox St

Alexandria NSW 2015

+61 2 8594 0400 Telephone

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au.environmental.sydney@sgs.com Email

SE218963 R0 SGS Reference 23/4/2021 Date Received 4/5/2021 Date Reported

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

PFAS subcontracted to SGS Melbourne, Unit 10/585 Blackburn Road Notting Hill VIC 3168, NATA Accreditation Number 2562, Site number 14420. Final report No: ME320181

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam.

SIGNATORIES

Akheeqar BENIAMEEN

Chemist

Bennet LO

Senior Organic Chemist/Metals Chemist

Dong LIANG

Metals/Inorganics Team Leader

Huong CRAWFORD

Production Manager

Ly Kim HA

Organic Section Head

Ravee SIVASUBRAMANIAM

S. Ravenolm.

Hygiene Team Leader

SGS Australia Pty Ltd ABN 44 000 964 278

Environment, Health and

Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia t +61 2 8594 0400 f +61 2 8594 0499

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Member of the SGS Group

4/05/2021



VOC's in Soil [AN433] Tested: 27/4/2021

			82_BH102M_0.4-0.6	30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 20/4/2021	- 20/4/2021	20/4/2021	- 20/4/2021	- 20/4/2021
PARAMETER	UOM	LOR	SE218963.001	SE218963.002	SE218963.003	SE218963.004	SE218963.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			30-BH102M_0.2-0.3	30-BH102M_0.5-0.6	30-BH102M_2.0-2.1	30-BH102M_4.0-4.1	30-BH103_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	20/4/2021 SE218963.006	20/4/2021 SE218963.007	20/4/2021 SE218963.008	20/4/2021 SE218963.009	20/4/2021 SE218963.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			30-BH103_0.9-1.0	30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
PARAMETER	UOM	LOR	20/4/2021 SE218963.011	20/4/2021 SE218963.012	20/4/2021 SE218963.013	20/4/2021 SE218963.014	20/4/2021 SE218963.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			20 BH106M 0 2 0 4	20 BH106M 1 1 1 1	20 BH106M 1 0 2 0	30-BH106M_3.4-3.5	20 BH107 0 2 0 4
			30-BH 106W_0.3-0.4	30-BH 100W_1.1-1.2	30-BH 106W_1.9-2.0	30-BH 106WI_3.4-3.5	30-БП107_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.017	SE218963.018	SE218963.019	SE218963.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

4/05/2021 Page 2 of 21





VOC's in Soil [AN433] Tested: 27/4/2021 (continued)

			30-BH107_0.9-1.0	30-BH107_2.3-2.4	30-BH108_0.2-0.3	30-BH108_0.4-0.5	30-BH108_1.2-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.021	SE218963.022	SE218963.023	SE218963.024	SE218963.025
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			30-BH108_2.7-2.8	30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.026	SE218963.027	SE218963.028	SE218963.029
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1

4/05/2021 Page 3 of 21



Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 27/4/2021

			82_BH102M_0.4-0.6	30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.001	SE218963.002	SE218963.003	SE218963.004	SE218963.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			30-BH102M_0.2-0.3	30-BH102M_0.5-0.6	30-BH102M_2.0-2.1	30-BH102M_4.0-4.1	30-BH103_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 20/4/2021	- 20/4/2021	- 20/4/2021	- 20/4/2021	- 20/4/2021
PARAMETER	UOM	LOR	SE218963.006	SE218963.007	SE218963.008	SE218963.009	SE218963.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			30-BH103_0.9-1.0	30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.011	SE218963.012	SE218963.013	SE218963.014	SE218963.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			30-BH106M_0.3-0.4	30-BH106M_1.1-1.2	30-BH106M_1.9-2.0	30-BH106M_3.4-3.5	30-BH107_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.017	SE218963.018	SE218963.019	SE218963.020
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			30-BH107_0.9-1.0	30-BH107_2.3-2.4	30-BH108_0.2-0.3	30-BH108_0.4-0.5	30-BH108_1.2-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.021	SE218963.022	SE218963.023	SE218963.024	SE218963.025
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			30-BH108_2.7-2.8	30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.026	SE218963.027	SE218963.028	SE218963.029
TRH C6-C9	mg/kg	20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25

4/05/2021 Page 4 of 21



TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 27/4/2021

			82_BH102M_0.4-0.6	30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.001	SE218963.002	SE218963.003	SE218963.004	SE218963.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

			30-BH102M_0.2-0.3	30-BH102M_0.5-0.6	30-BH102M_2.0-2.1	30-BH102M_4.0-4.1	30-BH103_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
DADAMETER		1.00	20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.006	SE218963.007	SE218963.008	SE218963.009	SE218963.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	89	<45	<45	120	<45
TRH C29-C36	mg/kg	45	76	<45	<45	170	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	150	<90	<90	240	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	170	<110	<110	290	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	240	<210

			30-BH103_0.9-1.0	30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.011	SE218963.012	SE218963.013	SE218963.014	SE218963.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	81	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	140	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	170	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	150	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	220	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	310	<210	<210	<210	<210

4/05/2021 Page 5 of 21



TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 27/4/2021 (continued)

					1		
			30-BH106M_0.3-0.4	30-BH106M_1.1-1.2	30-BH106M_1.9-2.0	30-BH106M_3.4-3.5	30-BH107_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.017	SE218963.018	SE218963.019	SE218963.020
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	130	50	<45	<45
TRH C29-C36	mg/kg	45	<45	110	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	27	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	27	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	190	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	240	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	220	<210	<210	<210

			30-BH107_0.9-1.0	30-BH107_2.3-2.4	30-BH108_0.2-0.3	30-BH108_0.4-0.5	30-BH108_1.2-1.3
			30-BH10/_0.9-1.0	30-БП107_2.3-2.4	30-БП100_0.2-0.3	30-БП106_0.4-0.5	30-БП100_1.2-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.021	SE218963.022	SE218963.023	SE218963.024	SE218963.025
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

			30-BH108_2.7-2.8	30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.026	SE218963.027	SE218963.028	SE218963.029
TRH C10-C14	mg/kg	20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	88	<45	<45	<45
TRH C29-C36	mg/kg	45	200	<45	<45	<45
TRH C37-C40	mg/kg	100	170	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	200	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	260	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	290	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	460	<210	<210	<210

4/05/2021 Page 6 of 21



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/4/2021

			00 01110011 0 1 0 0	00 511404 00 00	00 BU404 0 5 0 0	00 BUILDI 00 40	00 BU404 4 4 4 5
			82_BH102M_0.4-0.6	30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.001	SE218963.002	SE218963.003	SE218963.004	SE218963.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.8	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.8	<0.1	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	0.8	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	0.4	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.4	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.4	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.4	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.5</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	0.5	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>0.6</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	0.6	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.6</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	0.6	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	5.0	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	5.0	<0.8	<0.8	<0.8	<0.8

		_	00 01110011 0000	00 01140011 0 5 0 0	00 DU400M 00 04	00 51140011 40 44	00 511100 0001
			30-BH102M_0.2-0.3	30-BH102M_0.5-0.6	30-BH102M_2.0-2.1	30-BH102M_4.0-4.1	30-BH103_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	20/4/2021 SE218963.006	20/4/2021 SE218963.007	20/4/2021 SE218963.008	20/4/2021 SE218963.009	20/4/2021 SE218963.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
* *			<0.1	<0.1	<0.1	<0.1	-
Acenaphthylene	mg/kg	0.1	-				<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.1	<0.1	0.3	<0.1	0.3
Pyrene	mg/kg	0.1	0.2	<0.1	0.3	<0.1	0.4
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	0.2
Chrysene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.2
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.3
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	0.2
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	0.2
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	0.2
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td>0.2</td><td><0.2</td><td>0.3</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	<0.2	0.2	<0.2	0.3
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td>0.3</td><td><0.3</td><td>0.4</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	<0.3	0.3	<0.3	0.4
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td>0.3</td><td><0.2</td><td>0.3</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	<0.2	0.3	<0.2	0.3
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	1.8	<0.8	2.0
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	1.8	<0.8	2.0

4/05/2021 Page 7 of 21



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/4/2021 (continued)

			30-BH103_0.9-1.0	30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5
					_		
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	- 20/4/2021	- 20/4/2021	- 20/4/2021	- 20/4/2021
PARAMETER	UOM	LOR	SE218963.011	20/4/2021 SE218963.012	SE218963.013	SE218963.014	SE218963.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.3	0.3	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.5	0.8	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	0.6	0.8	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	0.2	0.5	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.2	0.6	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	1.0	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	0.1	0.5	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.2	0.9	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.1	1.0	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.1	1.1	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.2</td><td>1.3</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	0.2	1.3	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>0.3</td><td>1.4</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	0.3	1.4	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.3</td><td>1.3</td><td>0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	0.3	1.3	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	2.5	7.7	0.9	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	2.5	7.7	0.9	<0.8	<0.8

			00 DIMONE 0 0 0 4	00 01140014 4 4 4 0	00 01140014 4 0 0 0	00 01110011 0 1 0 1	00 011400 0004
			30-BH106M_0.3-0.4	30-BH106M_1.1-1.2	30-BH106M_1.9-2.0	30-BH106M_3.4-3.5	30-BH107_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.017	SE218963.018	SE218963.019	SE218963.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.5	<0.1	<0.1	<0.1	0.1
Pyrene	mg/kg	0.1	0.5	<0.1	<0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	0.1
Benzo(k)fluoranthene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.4</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	0.4	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>0.5</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	0.5	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.5</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	0.5	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	3.0	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	3.0	<0.8	<0.8	<0.8	<0.8

4/05/2021 Page 8 of 21



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 27/4/2021 (continued)

			30-BH107_0.9-1.0	30-BH107_2.3-2.4	30-BH108_0.2-0.3	30-BH108_0.4-0.5	30-BH108_1.2-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.021	21/4/2021 SE218963.022	SE218963.023	SE218963.024	21/4/2021 SE218963.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1	0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

			30-BH108_2.7-2.8	30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER Naphthalene	UOM mg/kg	0.1	SE218963.026 <0.1	SE218963.027 <0.1	SE218963.028 <0.1	SE218963.029 <0.1
2-methylnaphthalene		0.1	<0.1	<0.1	<0.1	<0.1
· ' '	mg/kg					-
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.1	0.3	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.3	1.2	0.2	<0.1
Pyrene	mg/kg	0.1	0.4	1.3	0.3	<0.1
Benzo(a)anthracene	mg/kg	0.1	0.1	0.6	0.1	<0.1
Chrysene	mg/kg	0.1	0.2	0.7	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	1.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	0.1	0.5	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.2	0.8	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.1	0.7	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.1	0.8	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.2</td><td>1.1</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	0.2	1.1	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>0.3</td><td>1.2</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	0.3	1.2	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.3</td><td>1.1</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	0.3	1.1	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	1.8	7.9	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	1.8	7.9	<0.8	<0.8

4/05/2021 Page 9 of 21





OC Pesticides in Soil [AN420] Tested: 27/4/2021

PARAMETER VOM VOM VOM SOIL SOIL								
PARAMETER UOM CON 2004/2021 stribes.000 2004/2021 stribes.3000 2004/2021 stribes.3010 2004/2021 stribes.3010 2014/2021 stribes.3010 2004/2021 stribes.3010 2004/2021 stribes.3010 2004/2021 stribes.3010 2014/2021 stribes.3010				30-BH101_0.2-0.3	30-BH102M_0.2-0.3	30-BH103_0.3-0.4	30-BH104_0.4-0.5	30-BH105_0.4-0.5
PARAMETER UM VM SE21993.002 SE21993.000 204/0201 204/0201 SE21995.000 ADIA ADIA ADIA COLO COLO COLO ADIA ADIA <td></td> <td></td> <td></td> <td>SOIL</td> <td>SOIL</td> <td>SOIL</td> <td>SOIL</td> <td>SOIL</td>				SOIL	SOIL	SOIL	SOIL	SOIL
PARMETER UDM OR SE218953-002 SE218953-000 SE218953-000 SE218953-000 SE218953-000 SE218953-000 ACI OLD Hexachforbonzene (HCS) mg/kg 0.1 4-0.1								-
Heachthrobenzene (HCB) mg/kg 0.1 40								
Alpha BHC mg/kg 0.1 40.1 40.1 40.1 40.1 40.1 40.1 40.1								
Lindine mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1					-	-	-	
Heptachlor mg/kg 0.1	'			-			-	-
Addin mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <				-	-	-	-	
Beta BHC mg/kg 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 <t< td=""><td>· ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	· ·							
Delta BHC mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1								
Heptachlor epoxide mg/kg 0.1								
o.p²-DDE mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1								
Alpha Endosulfan mg/kg 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 <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 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <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 <0.2 <0.2	· · ·							
Gamma Chlordane mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <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 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2	*	mg/kg						
Alpha Chlordane mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <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 <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 <0.2 <0.2 <0.2 <0.2 <0.2	Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
trans-Nonachlor mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <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 <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 <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 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2	Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p.p-DDE mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin mg/kg 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 <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 <0.2 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin mg/kg 0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2	p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
O,p'-DDD mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
op-DDT mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <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 <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 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <	Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Beta Endosulfan mg/kg 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 <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 <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 <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 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p.p'-DDD mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p.p'-DDT mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endosulfan sulphate	p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides mg/kg 1 <1 <1 <1 <1 <1	Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

4/05/2021 Page 10 of 21



OC Pesticides in Soil [AN420] Tested: 27/4/2021 (continued)

PARAMETER Hexachlorobenzene (HCB) Alpha BHC	UOM mg/kg mg/kg	LOR 0.1	SOIL - 21/4/2021 SE218963.016 <0.1	SOIL - 21/4/2021 SE218963.023
Hexachlorobenzene (HCB) Alpha BHC	mg/kg mg/kg	0.1	21/4/2021 SE218963.016	21/4/2021
Hexachlorobenzene (HCB) Alpha BHC	mg/kg mg/kg	0.1	SE218963.016	
Hexachlorobenzene (HCB) Alpha BHC	mg/kg mg/kg	0.1		SE218963.023
Alpha BHC	mg/kg		<0.1	
		0.4	•	<0.1
	mg/kg	0.1	<0.1	<0.1
Lindane		0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1

4/05/2021 Page 11 of 21





OP Pesticides in Soil [AN420] Tested: 27/4/2021

			30-BH101_0.2-0.3	30-BH102M_0.2-0.3	30-BH103_0.3-0.4	30-BH104_0.4-0.5	30-BH105_0.4-0.5
PARAMETER	UOM	LOR	SOIL - 20/4/2021 SE218963.002	SOIL - 20/4/2021 SE218963.006	SOIL - 20/4/2021 SE218963.010	SOIL - 20/4/2021 SE218963.012	SOIL - 20/4/2021 SE218963.015
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

			30-BH106M_0.3-0.4	30-BH108_0.2-0.3
			SOIL	SOIL
			21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.023
Dichlorvos	mg/kg	0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7

4/05/2021 Page 12 of 21





PCBs in Soil [AN420] Tested: 27/4/2021

			30-BH101_0.2-0.3	30-BH102M_0.2-0.3	30-BH103_0.3-0.4	30-BH104_0.4-0.5	30-BH105_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.002	SE218963.006	SE218963.010	SE218963.012	SE218963.015
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

			30-BH106M_0.3-0.4	30-BH108_0.2-0.3
			SOIL	SOIL
			- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.023
Arochlor 1016	mg/kg	0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1

4/05/2021 Page 13 of 21



Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/4/2021

			82_BH102M_0.4-0.6	30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	- 20/4/2021	- 20/4/2021	- 20/4/2021	- 20/4/2021
PARAMETER	UOM	LOR	SE218963.001	SE218963.002	SE218963.003	SE218963.004	SE218963.005
Arsenic, As	mg/kg	1	5	4	5	9	2300
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	16	0.5	17
Chromium, Cr	mg/kg	0.5	10	18	22	17	95
Copper, Cu	mg/kg	0.5	24	8.2	120	6.4	1400
Lead, Pb	mg/kg	1	42	11	740	190	1600
Nickel, Ni	mg/kg	0.5	5.7	12	21	6.7	32
Zinc, Zn	mg/kg	2	55	20	360	99	1300

			30-BH102M 0 2-0 3	30-BH102M 0 5-0 6	30-BH102M 2 0-2 1	30-BH102M 4.0-4.1	30-BH103_0.3-0.4
			00 5111020.2 0.0	00 5111020.0 0.0	00 5111022.0 2.1	00 B11102III_4.0 4.1	00 211100_0.0 0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.006	SE218963.007	SE218963.008	SE218963.009	SE218963.010
Arsenic, As	mg/kg	1	20	14	200	15	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	1.9	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	4.1	27	7.4	9.0	2.4
Copper, Cu	mg/kg	0.5	18	12	130	52	5.7
Lead, Pb	mg/kg	1	66	98	490	110	19
Nickel, Ni	mg/kg	0.5	1.5	4.8	3.5	9.1	1.0
Zinc, Zn	mg/kg	2	35	54	140	120	15

			30-BH103_0.9-1.0	30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.011	SE218963.012	SE218963.013	SE218963.014	SE218963.015
Arsenic, As	mg/kg	1	6	2	6	6	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	7.6	15	10	9.5
Copper, Cu	mg/kg	0.5	16	18	12	19	23
Lead, Pb	mg/kg	1	120	75	110	280	53
Nickel, Ni	mg/kg	0.5	3.4	4.5	5.7	7.4	13
Zinc, Zn	mg/kg	2	83	110	82	140	100

			30-BH106M_0.3-0.4	30-BH106M_1.1-1.2	30-BH106M_1.9-2.0	30-BH106M_3.4-3.5	30-BH107_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.017	SE218963.018	SE218963.019	SE218963.020
Arsenic, As	mg/kg	1	4	10	6	10	12
Cadmium, Cd	mg/kg	0.3	0.9	1.3	1.2	0.7	0.9
Chromium, Cr	mg/kg	0.5	79	130	110	160	13
Copper, Cu	mg/kg	0.5	72	600	130	290	19
Lead, Pb	mg/kg	1	140	530	530	200	92
Nickel, Ni	mg/kg	0.5	50	58	38	40	8.5
Zinc, Zn	mg/kg	2	520	2700	700	410	820

4/05/2021 Page 14 of 21



Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/4/2021 (continued)

			30-BH107_0.9-1.0	30-BH107 2.3-2.4	30-BH108 0.2-0.3	30-BH108 0.4-0.5	30-BH108 1.2-1.3
			30-511107_0.3-1.0	30-Billo7_2.3-2.4	30-B11100_0.2-0.3	30-511100_0.4-0.3	30-B11100_1.2-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.021	SE218963.022	SE218963.023	SE218963.024	SE218963.025
Arsenic, As	mg/kg	1	4	6	7	7	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	16	14	27	12
Copper, Cu	mg/kg	0.5	33	30	15	12	15
Lead, Pb	mg/kg	1	29	96	21	18	25
Nickel, Ni	mg/kg	0.5	28	10	5.9	1.4	6.6
Zinc, Zn	mg/kg	2	63	99	28	14	180

			30-BH108_2.7-2.8	30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.026	SE218963.027	SE218963.028	SE218963.029
Arsenic, As	mg/kg	1	8	18	3	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	11	7.7	10
Copper, Cu	mg/kg	0.5	12	24	5.9	9.2
Lead, Pb	mg/kg	1	140	38	10	20
Nickel, Ni	mg/kg	0.5	4.6	2.7	3.1	1.7
Zinc, Zn	mg/kg	2	110	42	15	14

4/05/2021 Page 15 of 21





Mercury in Soil [AN312] Tested: 30/4/2021

			82_BH102M_0.4-0.6	30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.001	SE218963.002	SE218963.003	SE218963.004	SE218963.005
Mercury	mg/kg	0.05	0.12	<0.05	0.14	<0.05	0.11

			30-BH102M_0.2-0.3	30-BH102M_0.5-0.6	30-BH102M_2.0-2.1	30-BH102M_4.0-4.1	30-BH103_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.006	SE218963.007	SE218963.008	SE218963.009	SE218963.010
Mercury	mg/kg	0.05	<0.05	<0.05	0.10	<0.05	<0.05

			30-BH103_0.9-1.0	30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.011	SE218963.012	SE218963.013	SE218963.014	SE218963.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	0.06	<0.05

			30-BH106M_0.3-0.4	30-BH106M_1.1-1.2	30-BH106M_1.9-2.0	30-BH106M_3.4-3.5	30-BH107_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.017	SE218963.018	SE218963.019	SE218963.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	0.05

			30-BH107_0.9-1.0	30-BH107_2.3-2.4	30-BH108_0.2-0.3	30-BH108_0.4-0.5	30-BH108_1.2-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.021	SE218963.022	SE218963.023	SE218963.024	SE218963.025
Mercury	mg/kg	0.05	<0.05	0.12	<0.05	<0.05	<0.05

			30-BH108_2.7-2.8	30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.026	SE218963.027	SE218963.028	SE218963.029
Mercury	mg/kg	0.05	0.13	<0.05	<0.05	<0.05

4/05/2021 Page 16 of 21





Moisture Content [AN002] Tested: 27/4/2021

			82_BH102M_0.4-0.6	30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.001	SE218963.002	SE218963.003	SE218963.004	SE218963.005
% Moisture	%w/w	1	14.5	9.4	10.9	4.2	21.2

			30-BH102M_0.2-0.3	30-BH102M_0.5-0.6	30-BH102M_2.0-2.1	30-BH102M_4.0-4.1	30-BH103_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.006	SE218963.007	SE218963.008	SE218963.009	SE218963.010
% Moisture	%w/w	1	10.0	16.3	10.8	13.4	9.9

			30-BH103_0.9-1.0	30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.011	SE218963.012	SE218963.013	SE218963.014	SE218963.015
% Moisture	%w/w	1	16.0	12.2	17.9	17.5	7.0

			30-BH106M_0.3-0.4	30-BH106M_1.1-1.2	30-BH106M_1.9-2.0	30-BH106M_3.4-3.5	30-BH107_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.016	SE218963.017	SE218963.018	SE218963.019	SE218963.020
% Moisture	%w/w	1	8.7	12.4	13.3	23.4	12.4

			30-BH107_0.9-1.0	30-BH107_2.3-2.4	30-BH108_0.2-0.3	30-BH108_0.4-0.5	30-BH108_1.2-1.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.021	SE218963.022	SE218963.023	SE218963.024	SE218963.025
% Moisture	%w/w	1	19.8	14.5	14.6	12.6	17.1

			30-BH108_2.7-2.8	30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL
						-
			21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.026	SE218963.027	SE218963.028	SE218963.029
% Moisture	%w/w	1	19.6	16.7	10.2	18.3

4/05/2021 Page 17 of 21



Fibre Identification in soil [AN602] Tested: 3/5/2021

			30-BH101_0.2-0.3	30-BH101_0.5-0.6	30-BH101_0.9-1.0	30-BH101_4.4-4.5	30-BH102M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.002	SE218963.003	SE218963.004	SE218963.005	SE218963.006
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			30-BH102M_0.5-0.6	30-BH102M_2.0-2.1	30-BH102M_4.0-4.1	30-BH103_0.3-0.4	30-BH103_0.9-1.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963.007	SE218963.008	SE218963.009	SE218963.010	SE218963.011
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			30-BH104_0.4-0.5	30-BH104_2.0-2.1	30-BH104_2.7-2.5	30-BH105_0.4-0.5	30-BH106M_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			20/4/2021	20/4/2021	20/4/2021	20/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.012	SE218963.013	SE218963.014	SE218963.015	SE218963.016
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			30-BH106M_1.1-1.2	30-BH106M_1.9-2.0	30-BH106M_3.4-3.5	30-BH107_0.3-0.4	30-BH107_0.9-1.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.017	SE218963.018	SE218963.019	SE218963.020	SE218963.021
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			30-BH107_2.3-2.4	30-BH108_0.2-0.3	30-BH108_0.4-0.5	30-BH108_1.2-1.3	30-BH108_2.7-2.8
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218963.022	SE218963.023	SE218963.024	SE218963.025	SE218963.026
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			30-BH109_0.3-0.4	30-BH110M_0.2-0.3	30-BH110M_1.4-1.5
			SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218963.027	SE218963.028	SE218963.029
Asbestos Detected	No unit	-	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01

4/05/2021 Page 18 of 21



Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples [MA-1523] Tested: 3/5/2021

			30-BH101_0.2-0.3	30-BH102M_0.2-0.3	30-BH104_0.4-0.5	30-BH106M_0.3-0.4
			SOIL	SOIL	SOIL	SOIL
			20/4/2021	20/4/2021	20/4/2021	21/4/2021
PARAMETER Desfluence but as a condition of the condition	UOM	LOR 0.0016	SE218963.002	SE218963.006	SE218963.012	SE218963.016
Perfluorobutanoic acid (PFBA)	mg/kg	_	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	0.0019
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008

4/05/2021 Page 19 of 21



METHOD SUMMARY



METHOD _

— METHODOLOGY SUMMARY —

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

ΔN040/ΔN320

A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.

AN040

A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

AN312

Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500

AN403

Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.

AN403

Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.

AN403

The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.

AN420

(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

AN420

SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

AN433

VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

AN602

Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.

AN602

Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.

AN602

AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

4/05/2021 Page 20 of 21





METHOD SUMMARY

AN602

The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):
- the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in (b) asbestos-containing materials are found to be less than 0.1g/kg: and
- these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible (c) under stereo-microscope viewing conditions.

MA-1523

This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

FOOTNOTES -

NATA accreditation does not cover the performance of this service.

Indicative data, theoretical holding time exceeded.

Indicates that both * and ** apply.

Not analysed. NVL Not validated.

Insufficient sample for IS analysis.

LNR

Sample listed, but not received.

UOM Unit of Measure. LOR Limit of Reporting. Raised/lowered Limit of $\uparrow \downarrow$

Reporting.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bg is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be $found\ here: \underline{www.sgs.com.au/en-gb/environment-health-and-safety}\,.$

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4/05/2021 Page 21 of 21





STATEMENT OF QA/QC PERFORMANCE

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Project E25077 Hughes,Waratah,Wharf Melrose Pk SGS Reference SE218963 R0
Order Number Date Received 23 Apr 2021

Samples 29

COMMENTS

Duplicate

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

Date Reported

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Surrogate Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples 1 item

VOC's in Soil 5 items

04 May 2021

Volatile Petroleum Hydrocarbons in Soil 5 items

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES 1 item

Matrix Spike Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES 2 items

SAMPLE SUMMARY

Samples clearly labelled
Sample container provider
Samples received in correct containers
Date documentation received
Samples received in good order
Sample temperature upon receipt
Turnaround time requested

Yes SGS Yes 26/4/2021 @3.35PN Yes

10.0°C

Standard

Complete documentation received Sample cooling method Sample counts by matrix Type of documentation received Samples received without headspace Sufficient sample for analysis Yes Ice Bricks 29 Soil COC N/A Yes

SGS Australia Pty Ltd ABN 44 000 964 278 Environment, Health and Safety

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00 www.sgs.com.au

4 items



HOLDING TIME SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH101_0.2-0.3	SE218963.002	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223745	20 Apr 2021	23 Apr 2021	20 Apr 2022	03 May 2021	20 Apr 2022	04 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	04 May 2021

Mercury in Soil Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH101_0.2-0.3	SE218963.002	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223706	20 Apr 2021	23 Apr 2021	18 May 2021	30 Apr 2021	18 May 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223706	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223706	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223706	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223706	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223705	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021

4/5/2021 Page 2 of 33



HOLDING TIME SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH101_0.2-0.3	SE218963.002	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH101_0.5-0.6	SE218963.003	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH101_0.9-1.0	SE218963.004	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH101_4.4-4.5	SE218963.005	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH102M_0.2-0.3	SE218963.006	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH102M_0.5-0.6	SE218963.007	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH102M_2.0-2.1	SE218963.008	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH102M_4.0-4.1	SE218963.009	LB223487	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	02 May 2021	29 Apr 2021
30-BH103_0.3-0.4	SE218963.010	LB223662	20 Apr 2021	23 Apr 2021	04 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223662	20 Apr 2021	23 Apr 2021	04 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223662	20 Apr 2021	23 Apr 2021	04 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223662	20 Apr 2021	23 Apr 2021	04 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223662	20 Apr 2021	23 Apr 2021	04 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223662	20 Apr 2021	23 Apr 2021	04 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223662	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.2-0.3	SE218963.002	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

4/5/2021 Page 3 of 33

Analysis Due Analysed



Sample Name Sample No.

HOLDING TIME SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

OC Pesticides in Soil (continued) Method: ME-(AU)-[ENV]AN420

30-BH110M_1.4-1.5	SE218963.029	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
OP Pesticides in Soil							Method:	ME-(AU)-[ENV]AN420
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.2-0.3	SE218963.002	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

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Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.2-0.3	SE218963.002	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

4/5/2021 Page 4 of 33



HOLDING TIME SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH108_2.7-2.8	SE218963.026	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.2-0.3	SE218963.002	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH101_0.2-0.3	SE218963.002	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223701	20 Apr 2021	23 Apr 2021	17 Oct 2021	30 Apr 2021	17 Oct 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223701	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223701	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223701	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223701	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021

4/5/2021 Page 5 of 33



HOLDING TIME SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH108_0.2-0.3	SE218963.023	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223704	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.2-0.3	SE218963.002	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.5-0.6	SE218963.003	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_0.9-1.0	SE218963.004	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH101_4.4-4.5	SE218963.005	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.2-0.3	SE218963.006	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_0.5-0.6	SE218963.007	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_2.0-2.1	SE218963.008	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH102M_4.0-4.1	SE218963.009	LB223477	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.3-0.4	SE218963.010	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223478	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223478	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
82_BH102M_0.4-0.6	SE218963.001	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH101_0.2-0.3	SE218963.002	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH101_0.5-0.6	SE218963.003	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH101_0.9-1.0	SE218963.004	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH101_4.4-4.5	SE218963.005	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_0.2-0.3	SE218963.006	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_0.5-0.6	SE218963.007	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_2.0-2.1	SE218963.008	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_4.0-4.1	SE218963.009	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH103_0.3-0.4	SE218963.010	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

4/5/2021 Page 6 of 33



HOLDING TIME SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued) Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH107_0.3-0.4	SE218963.020	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433

Sample Name 82_BH102M_0.4-0.6 30-BH101_0.2-0.3	Sample No. SE218963.001 SE218963.002	QC Ref LB223484	Sampled 20 Apr 2021	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH101_0.2-0.3			20 Apr 2021					
	SE218963.002		207101 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
00 BUI404 0 F 0 0		LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH101_0.5-0.6	SE218963.003	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH101_0.9-1.0	SE218963.004	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH101_4.4-4.5	SE218963.005	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_0.2-0.3	SE218963.006	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_0.5-0.6	SE218963.007	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_2.0-2.1	SE218963.008	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH102M_4.0-4.1	SE218963.009	LB223484	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	29 Apr 2021
30-BH103_0.3-0.4	SE218963.010	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH103_0.9-1.0	SE218963.011	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_0.4-0.5	SE218963.012	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.0-2.1	SE218963.013	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH104_2.7-2.5	SE218963.014	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH105_0.4-0.5	SE218963.015	LB223479	20 Apr 2021	23 Apr 2021	04 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_0.3-0.4	SE218963.016	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.1-1.2	SE218963.017	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_1.9-2.0	SE218963.018	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH106M_3.4-3.5	SE218963.019	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.3-0.4	SE218963.020	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_0.9-1.0	SE218963.021	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH107_2.3-2.4	SE218963.022	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.2-0.3	SE218963.023	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_0.4-0.5	SE218963.024	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_1.2-1.3	SE218963.025	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH108_2.7-2.8	SE218963.026	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH109_0.3-0.4	SE218963.027	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_0.2-0.3	SE218963.028	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021
30-BH110M_1.4-1.5	SE218963.029	LB223479	21 Apr 2021	23 Apr 2021	05 May 2021	27 Apr 2021	06 Jun 2021	03 May 2021

4/5/2021 Page 7 of 33



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil	Method: ME-(AU)-IENVIAN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	101
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	104
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	106
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	105
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	106
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	111
	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	106

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	90
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	90
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	93
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	99
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	96
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	91
	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	88
d14-p-terphenyl (Surrogate)	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	103
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	104
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	93
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	86
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	99
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	90
	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	93

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	70 - 130%	95
	30-BH101_0.2-0.3	SE218963.002	%	70 - 130%	90
	30-BH101_0.5-0.6	SE218963.003	%	70 - 130%	92
	30-BH101_0.9-1.0	SE218963.004	%	70 - 130%	97
	30-BH101_4.4-4.5	SE218963.005	%	70 - 130%	93
	30-BH102M_0.2-0.3	SE218963.006	%	70 - 130%	90
	30-BH102M_0.5-0.6	SE218963.007	%	70 - 130%	85
	30-BH102M_2.0-2.1	SE218963.008	%	70 - 130%	100
	30-BH102M_4.0-4.1	SE218963.009	%	70 - 130%	92
	30-BH103_0.3-0.4	SE218963.010	%	70 - 130%	93
	30-BH103_0.9-1.0	SE218963.011	%	70 - 130%	94
	30-BH104_0.4-0.5	SE218963.012	%	70 - 130%	99
	30-BH104_2.0-2.1	SE218963.013	%	70 - 130%	93
	30-BH104_2.7-2.5	SE218963.014	%	70 - 130%	91
	30-BH105_0.4-0.5	SE218963.015	%	70 - 130%	96
	30-BH106M_0.3-0.4	SE218963.016	%	70 - 130%	91
	30-BH106M_1.1-1.2	SE218963.017	%	70 - 130%	80
	30-BH106M_1.9-2.0	SE218963.018	%	70 - 130%	102
	30-BH106M_3.4-3.5	SE218963.019	%	70 - 130%	94
	30-BH107_0.3-0.4	SE218963.020	%	70 - 130%	93
	30-BH107_0.9-1.0	SE218963.021	%	70 - 130%	90
	30-BH107_2.3-2.4	SE218963.022	%	70 - 130%	92
	30-BH108_0.2-0.3	SE218963.023	%	70 - 130%	88
	30-BH108_0.4-0.5	SE218963.024	%	70 - 130%	101
	30-BH108_1.2-1.3	SE218963.025	%	70 - 130%	91
	30-BH108_2.7-2.8	SE218963.026	%	70 - 130%	93
	30-BH109_0.3-0.4	SE218963.027	%	70 - 130%	94
	30-BH110M_0.2-0.3	SE218963.028	%	70 - 130%	93
	30-BH110M_1.4-1.5	SE218963.029	%	70 - 130%	91
d14-p-terphenyl (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	70 - 130%	101
	30-BH101_0.2-0.3	SE218963.002	%	70 - 130%	103
	30-BH101_0.5-0.6	SE218963.003	%	70 - 130%	103
	30-BH101_0.9-1.0	SE218963.004	%	70 - 130%	110
	30-BH101_4.4-4.5	SE218963.005	%	70 - 130%	101
	30-BH102M_0.2-0.3	SE218963.006	%	70 - 130%	104

4/5/2021 Page 8 of 33





Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

				_	
arameter	Sample Name	Sample Number	Units	Criteria	Recovery '
14-p-terphenyl (Surrogate)	30-BH102M_0.5-0.6	SE218963.007	%	70 - 130%	97
	30-BH102M_2.0-2.1	SE218963.008	%	70 - 130%	107
	30-BH102M_4.0-4.1	SE218963.009	%	70 - 130%	99
	30-BH103_0.3-0.4	SE218963.010	%	70 - 130%	93
	30-BH103_0.9-1.0	SE218963.011	%	70 - 130%	85
	30-BH104_0.4-0.5	SE218963.012	%	70 - 130%	86
	30-BH104_2.0-2.1	SE218963.013	%	70 - 130%	93
	30-BH104_2.7-2.5	SE218963.014	%	70 - 130%	98
	30-BH105_0.4-0.5	SE218963.015	%	70 - 130%	99
	30-BH106M_0.3-0.4	SE218963.016	%	70 - 130%	90
	30-BH106M_1.1-1.2	SE218963.017	%	70 - 130%	76
	30-BH106M_1.9-2.0	SE218963.018	%	70 - 130%	103
	30-BH106M_3.4-3.5	SE218963.019	%	70 - 130%	98
	30-BH107_0.3-0.4	SE218963.020	%	70 - 130%	95
	30-BH107_0.9-1.0	SE218963.021	%	70 - 130%	96
	30-BH107_2.3-2.4	SE218963.022	%	70 - 130%	100
	30-BH107_2.3-2.4 30-BH108_0.2-0.3	SE218963.023	%	70 - 130%	93
	30-BH108_0.2-0.3 30-BH108_0.4-0.5	SE218963.024	% %		105
				70 - 130%	
	30-BH108_1.2-1.3	SE218963.025	%	70 - 130%	95
	30-BH108_2.7-2.8	SE218963.026	%	70 - 130%	93
	30-BH109_0.3-0.4	SE218963.027	%	70 - 130%	87
	30-BH110M_0.2-0.3	SE218963.028	%	70 - 130%	103
	30-BH110M_1.4-1.5	SE218963.029	%	70 - 130%	98
d5-nitrobenzene (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	70 - 130%	97
	30-BH101_0.2-0.3	SE218963.002	%	70 - 130%	95
	30-BH101_0.5-0.6	SE218963.003	%	70 - 130%	96
	30-BH101_0.9-1.0	SE218963.004	%	70 - 130%	100
	30-BH101_4.4-4.5	SE218963.005	%	70 - 130%	96
	30-BH102M_0.2-0.3	SE218963.006	%	70 - 130%	98
	30-BH102M_0.5-0.6	SE218963.007	%	70 - 130%	92
	30-BH102M_2.0-2.1	SE218963.008	%	70 - 130%	104
	30-BH102M_4.0-4.1	SE218963.009	%	70 - 130%	97
	30-BH103_0.3-0.4	SE218963.010	%	70 - 130%	100
	30-BH103 0.9-1.0	SE218963.011	%	70 - 130%	101
	30-BH104_0.4-0.5	SE218963.012	%	70 - 130%	102
	30-BH104_2.0-2.1	SE218963.013	%	70 - 130%	97
	30-BH104_2.7-2.5	SE218963.014	%	70 - 130%	99
	30-BH105 0.4-0.5	SE218963.015	%	70 - 130%	99
	30-BH106M_0.3-0.4	SE218963.016	%	70 - 130%	94
	30-BH106M_1.1-1.2	SE218963.017	% %	70 - 130%	88
			%		
	30-BH106M_1.9-2.0	SE218963.018		70 - 130%	114
	30-BH106M_3.4-3.5	SE218963.019	<u>%</u>	70 - 130%	105
	30-BH107_0.3-0.4	SE218963.020	%	70 - 130%	102
	30-BH107_0.9-1.0	SE218963.021	%	70 - 130%	102
	30-BH107_2.3-2.4	SE218963.022	%	70 - 130%	100
	30-BH108_0.2-0.3	SE218963.023	%	70 - 130%	92
	30-BH108_0.4-0.5	SE218963.024	%	70 - 130%	102
	30-BH108_1.2-1.3	SE218963.025	%	70 - 130%	101
	30-BH108_2.7-2.8	SE218963.026	%	70 - 130%	98
	30-BH109_0.3-0.4	SE218963.027	%	70 - 130%	103
	30-BH110M_0.2-0.3	SE218963.028	%	70 - 130%	104
	30-BH110M_1.4-1.5	SE218963.029	%	70 - 130%	97

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	101
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	104
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	106
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	105
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	106
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	111

4/5/2021 Page 9 of 33

106

0 - 150%



(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard

SURROGATES

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PCBs in Soil (continued)				Method: N	IE-(AU)-[ENV]AN420
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	106
Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples					Method: MA-1523
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 130%	45
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 130%	45
	30-BH104_0.4-0.5	SE218963.012	%	0 - 130%	49
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 130%	41
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	77
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	81
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	76
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	86
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	38
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	40
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	39
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	41
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	41
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	47
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	48
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	46
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	95
	30-BH102M_0.2-0.3	SE218963.006		0 - 150%	86
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	86
	30-BH106M_0.3-0.4	SE218963.016	- %	0 - 150%	88
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	22
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	12
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	18
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	14
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	107
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	115
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	112
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	122
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	97
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	105
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	98
(1004 PEON)	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	107
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	111
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	114
	30-BH104_0.4-0.5	SE218963.012	<u>%</u> %	0 - 150%	111
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	30-BH106M_0.3-0.4 30-BH101 0.2-0.3	SE218963.016 SE218963.002	%	0 - 150% 0 - 150%	118
(1304-FFBA) Isotopically Labelled Internal Necovery Standard	30-BH101_0.2-0.3 30-BH102M 0.2-0.3	SE218963.006	%	0 - 150%	100
	30-BH104 0.4-0.5	SE218963.012	%	0 - 150%	106
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	102
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	110
(1004 1 11ph) isotopically Educated internal recovery ciandard	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	112
	30-BH104 0.4-0.5	SE218963.012	%	0 - 150%	107
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	120
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	140
Control of the contro	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	138
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	135
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	163 †
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	30-BH101 0.2-0.3	SE218963.002	%	0 - 150%	93
a y content y content with the content of the conte	30-BH102M 0.2-0.3	SE218963.006	%	0 - 150%	92
	30-BH104 0.4-0.5	SE218963.012	%	0 - 150%	99
	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	94
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	111
	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	110
	30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	100

4/5/2021 Page 10 of 33

SE218963.016

SE218963.002

30-BH106M_0.3-0.4

30-BH101_0.2-0.3





Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples (continued)

Method: MA-1523

162FFPVAIN biotopically Labelled Internal Recovery Standard 36 H100M, 0.2-0.3 82 H100M, 0.3-0.4 82	Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
10.00 10.0	(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	92
1		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	89
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	84
Path	(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	101
1908 1908		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	109
1		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	109
\$\ align*** \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	106
Path	(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	80
1969-PFNA Isotopically Labelled Internal Recovery Standard 36-BH100R.0.3-0.4 \$8218863.016 % 0-150% 075 075 075 075 075 075 075 075 075 075		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	74
103-PFFFOX Interpretary Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0-150% 105 10		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	86
Section Sect		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	87
Part	(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	105
10-14-14-15-15-15-15-15-15-15-15-15-15-15-15-15-		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	112
CPAN-MEFOSA) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0.150% 49 40-MICOW_0.2-0.3 SE218963.006 % 0.150% 37 30-BH104_0.4-0.5 SE218963.012 % 0.150% 55 40-BH106W_0.3-0.4 SE218963.012 % 0.150% 55 40-BH106W_0.3-0.4 SE218963.002 % 0.150% 59 40-BH106W_0.2-0.3 SE218963.002 % 0.150% 59 40-BH106W_0.2-0.3 SE218963.002 % 0.150% 59 40-BH106W_0.3-0.4 SE218963.002 % 0.150% 49 40-BH106W_0.3-0.4 SE218963.002 % 0.150% 31 40-BH106W_0.3-0.4 SE218963.002 % 0.150% 32 40-BH106W_0.3-0.4 <td< td=""><td></td><td>30-BH104_0.4-0.5</td><td>SE218963.012</td><td>%</td><td>0 - 150%</td><td>115</td></td<>		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	115
SEPHORAP	30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	90	
1	(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	49
Description 10		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	37
0-3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.006 % 0-150% 59		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	61
SPETI SPET		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	55
Selection	(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	59
Selection Sele		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	60
CP-N-EtFOSA) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 -150% 31		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	59
S0-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 26		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	48
Second S	(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	31
SE218963.016		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	26
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 49 30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 53 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 65 30-BH106M_0.3-0.4 SE218963.016 % 0 - 150% 42 (D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 78 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 79 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 79 40-N-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH106M_0.3-0.4 SE218963.012 % 0 - 150% 78 40-N-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 56 40-N-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH102_0.2-0.3 SE218963.002 % 0 - 150% 56 40-N-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH102_0.2-0.3 SE218963.002 % 0 - 150% 51 40-N-N-EtFOSE) Isoto		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	37
S0-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 53 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 65 30-BH106M_0.3-0.4 SE218963.016 % 0 - 150% 42 (D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 78 30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 74 30-BH102M_0.2-0.3 SE218963.012 % 0 - 150% 79 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 88 (D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 56 30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 51 30-BH102M_0.2-0.3 SE218963.012 % 0 - 150% 51 30-BH102M_0.2-0.3 SE218963.012 % 0 - 150% 54 30-BH102M_0.2-0.5 SE218963.012 % 0 - 150% 54 30-BH102M_0.2-0.3 SE218963.012 %		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	48
S0-BH104_0.4-0.5 SE218963.012	(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	49
SE218963.016		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	53
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 78 30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 74 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 79 30-BH106M_0.3-0.4 SE218963.016 % 0 - 150% 88 (D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 56 30-BH102M_0.2-0.3 SE218963.012 % 0 - 150% 51 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 54		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	65
30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 74 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 79 30-BH106M_0.3-0.4 SE218963.016 % 0 - 150% 88 (D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 56 30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 51 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 54 30-BH104_0.4-0.5		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	42
30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 79 30-BH106M_0.3-0.4 SE218963.016 % 0 - 150% 88 (D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 56 30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 51 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 54 3	(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	78
30-BH106M_0.3-0.4 SE218963.016 % 0 - 150% 88		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	74
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard 30-BH101_0.2-0.3 SE218963.002 % 0 - 150% 56 30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 51 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 54		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	79
30-BH102M_0.2-0.3 SE218963.006 % 0 - 150% 51 30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 54		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	88
30-BH104_0.4-0.5 SE218963.012 % 0 - 150% 54	(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	30-BH101_0.2-0.3	SE218963.002	%	0 - 150%	56
		30-BH102M_0.2-0.3	SE218963.006	%	0 - 150%	51
30-BH106M_0.3-0.4		30-BH104_0.4-0.5	SE218963.012	%	0 - 150%	54
		30-BH106M_0.3-0.4	SE218963.016	%	0 - 150%	67

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	60 - 130%	76
	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	75
	30-BH101_0.5-0.6	SE218963.003	%	60 - 130%	69
	30-BH101_0.9-1.0	SE218963.004	%	60 - 130%	74
	30-BH101_4.4-4.5	SE218963.005	%	60 - 130%	58 ①
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	61
	30-BH102M_0.5-0.6	SE218963.007	%	60 - 130%	64
	30-BH102M_2.0-2.1	SE218963.008	%	60 - 130%	64
	30-BH102M_4.0-4.1	SE218963.009	%	60 - 130%	63
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	109
	30-BH103_0.9-1.0	SE218963.011	%	60 - 130%	115
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	120
	30-BH104_2.0-2.1	SE218963.013	%	60 - 130%	117
	30-BH104_2.7-2.5	SE218963.014	%	60 - 130%	111
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	118
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	119
	30-BH106M_1.1-1.2	SE218963.017	%	60 - 130%	124
	30-BH106M_1.9-2.0	SE218963.018	%	60 - 130%	117
	30-BH106M_3.4-3.5	SE218963.019	%	60 - 130%	116

4/5/2021 Page 11 of 33



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) Method: ME-(AU)-[ENV]AN433

					- 0
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	30-BH107_0.3-0.4	SE218963.020	%	60 - 130%	121
	30-BH107_0.9-1.0	SE218963.021	%	60 - 130%	62
	30-BH107_2.3-2.4	SE218963.022	%	60 - 130%	68
	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	72
	30-BH108_0.4-0.5	SE218963.024	%	60 - 130%	69
	30-BH108_1.2-1.3	SE218963.025	%	60 - 130%	69
	30-BH108_2.7-2.8	SE218963.026	%	60 - 130%	64
	30-BH109_0.3-0.4	SE218963.027	%	60 - 130%	67
	30-BH110M_0.2-0.3	SE218963.028	%	60 - 130%	66
	30-BH110M_1.4-1.5	SE218963.029	%	60 - 130%	68
d4-1,2-dichloroethane (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	60 - 130%	137 ①
	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	140 ①
	30-BH101_0.5-0.6	SE218963.003	%	60 - 130%	118
	30-BH101_0.9-1.0	SE218963.004	%	60 - 130%	139 †
	30-BH101_4.4-4.5	SE218963.005	%	60 - 130%	101
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	113
	30-BH102M_0.5-0.6	SE218963.007	%	60 - 130%	114
	30-BH102M_2.0-2.1	SE218963.008	%	60 - 130%	112
	30-BH102M_4.0-4.1	SE218963.009	%	60 - 130%	115
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	115
	30-BH103_0.9-1.0	SE218963.011	%	60 - 130%	120
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	126
					123
	30-BH104_2.0-2.1	SE218963.013	%	60 - 130%	
	30-BH104_2.7-2.5	SE218963.014	%	60 - 130%	116
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	124
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	120
	30-BH106M_1.1-1.2	SE218963.017	%	60 - 130%	114
	30-BH106M_1.9-2.0	SE218963.018	%	60 - 130%	107
	30-BH106M_3.4-3.5	SE218963.019	%	60 - 130%	123
	30-BH107_0.3-0.4	SE218963.020	%	60 - 130%	116
	30-BH107_0.9-1.0	SE218963.021	%	60 - 130%	70
	30-BH107_2.3-2.4	SE218963.022	%	60 - 130%	80
	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	83
	30-BH108_0.4-0.5	SE218963.024	%	60 - 130%	80
	30-BH108_1.2-1.3	SE218963.025	%	60 - 130%	83
	30-BH108_2.7-2.8	SE218963.026	%	60 - 130%	76
	30-BH109_0.3-0.4	SE218963.027	%	60 - 130%	85
	30-BH110M_0.2-0.3	SE218963.028	%	60 - 130%	82
	30-BH110M_1.4-1.5	SE218963.029	%	60 - 130%	85
d8-toluene (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	60 - 130%	114
	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	115
	30-BH101 0.5-0.6	SE218963.003	%	60 - 130%	99
	30-BH101_0.9-1.0	SE218963.004	%	60 - 130%	114
	30-BH101_4.4-4.5	SE218963.005	% %	60 - 130%	80
		SE218963.006	% 		
	30-BH102M_0.2-0.3			60 - 130%	89
	30-BH102M_0.5-0.6	SE218963.007	%	60 - 130%	95
	30-BH102M_2.0-2.1	SE218963.008	%	60 - 130%	94
	30-BH102M_4.0-4.1	SE218963.009	%	60 - 130%	93
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	111
	30-BH103_0.9-1.0	SE218963.011	%	60 - 130%	118
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	124
	30-BH104_2.0-2.1	SE218963.013	%	60 - 130%	121
	30-BH104_2.7-2.5	SE218963.014	%	60 - 130%	120
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	129
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	133 ①
	30-BH106M_1.1-1.2	SE218963.017	%	60 - 130%	121
	30-BH106M_1.9-2.0	SE218963.018	%	60 - 130%	120
	30-BH106M_3.4-3.5	SE218963.019	%	60 - 130%	114
	30-BH107 0.3-0.4	SE218963.020	%	60 - 130%	129
	30-BH107_0.9-1.0	SE218963.021	% %	60 - 130%	72
	30-BH107_2.3-2.4	SE218963.022	%	60 - 130%	83

4/5/2021 Page 12 of 33



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued	d) Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	89
	30-BH108_0.4-0.5	SE218963.024	%	60 - 130%	85
	30-BH108_1.2-1.3	SE218963.025	%	60 - 130%	86
	30-BH108_2.7-2.8	SE218963.026	%	60 - 130%	78
	30-BH109_0.3-0.4	SE218963.027	%	60 - 130%	88
	30-BH110M_0.2-0.3	SE218963.028	%	60 - 130%	85
	30-BH110M_1.4-1.5	SE218963.029	%	60 - 130%	89

Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433

Statile Fet Gledin Frydrocarbons in Coll				Wetflod: W	
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	60 - 130%	76
	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	75
	30-BH101_0.5-0.6	SE218963.003	%	60 - 130%	69
	30-BH101_0.9-1.0	SE218963.004	%	60 - 130%	74
	30-BH101_4.4-4.5	SE218963.005	%	60 - 130%	58 ①
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	61
	30-BH102M_0.5-0.6	SE218963.007	%	60 - 130%	64
	30-BH102M_2.0-2.1	SE218963.008	%	60 - 130%	64
	30-BH102M_4.0-4.1	SE218963.009	%	60 - 130%	63
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	109
	30-BH103_0.9-1.0	SE218963.011	%	60 - 130%	115
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	120
	30-BH104_2.0-2.1	SE218963.013	%	60 - 130%	117
	30-BH104_2.7-2.5	SE218963.014	%	60 - 130%	111
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	118
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	119
	30-BH106M_1.1-1.2	SE218963.017	%	60 - 130%	124
	30-BH106M_1.9-2.0	SE218963.018	%	60 - 130%	117
	30-BH106M_3.4-3.5	SE218963.019	%	60 - 130%	116
	30-BH107_0.3-0.4	SE218963.020	%	60 - 130%	121
	30-BH107_0.9-1.0	SE218963.021	%	60 - 130%	62
	30-BH107_2.3-2.4	SE218963.022	% %	60 - 130%	68
	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	72
	30-BH108 0.4-0.5	SE218963.024	% %	60 - 130%	69
		·			
	30-BH108_1.2-1.3	SE218963.025	%	60 - 130%	69
	30-BH108_2.7-2.8	SE218963.026	<u>%</u> %	60 - 130%	64
	30-BH109_0.3-0.4	SE218963.027		60 - 130%	67
	30-BH110M_0.2-0.3	SE218963.028	%	60 - 130%	66
4.4.0 diablass dhas (O	30-BH110M_1.4-1.5	SE218963.029	%	60 - 130%	68
4-1,2-dichloroethane (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	60 - 130%	137 ①
	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	140 ①
	30-BH101_0.5-0.6	SE218963.003	%	60 - 130%	118
	30-BH101_0.9-1.0	SE218963.004	%	60 - 130%	139 ①
	30-BH101_4.4-4.5	SE218963.005	%	60 - 130%	101
	30-BH102M_0.2-0.3	SE218963.006	%	60 - 130%	113
	30-BH102M_0.5-0.6	SE218963.007	%	60 - 130%	114
	30-BH102M_2.0-2.1	SE218963.008	%	60 - 130%	112
	30-BH102M_4.0-4.1	SE218963.009	%	60 - 130%	115
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	115
	30-BH103_0.9-1.0	SE218963.011	%	60 - 130%	120
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	126
	30-BH104_2.0-2.1	SE218963.013	%	60 - 130%	123
	30-BH104_2.7-2.5	SE218963.014	%	60 - 130%	116
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	124
	30-BH106M_0.3-0.4	SE218963.016	%	60 - 130%	120
	30-BH106M_1.1-1.2	SE218963.017	%	60 - 130%	114
	30-BH106M_1.9-2.0	SE218963.018	%	60 - 130%	107
	30-BH106M_3.4-3.5	SE218963.019	%	60 - 130%	123
	30-BH107_0.3-0.4	SE218963.020	%	60 - 130%	116
	30-BH107_0.9-1.0	SE218963.021	%	60 - 130%	70
		SE218963.022			

4/5/2021 Page 13 of 33





Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-[ENV]AN433

olatile Petroleum Hydrocarbons in Soli (continued)				Method: Mi	=-(AU)-[ENV]AN
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	30-BH108_0.2-0.3	SE218963.023	%	60 - 130%	83
	30-BH108_0.4-0.5	SE218963.024	%	60 - 130%	80
	30-BH108_1.2-1.3	SE218963.025	%	60 - 130%	83
	30-BH108_2.7-2.8	SE218963.026	%	60 - 130%	76
	30-BH109_0.3-0.4	SE218963.027	%	60 - 130%	85
	30-BH110M_0.2-0.3	SE218963.028	%	60 - 130%	82
	30-BH110M_1.4-1.5	SE218963.029	%	60 - 130%	85
18-toluene (Surrogate)	82_BH102M_0.4-0.6	SE218963.001	%	60 - 130%	114
	30-BH101_0.2-0.3	SE218963.002	%	60 - 130%	115
	30-BH101 0.5-0.6	SE218963.003	%	60 - 130%	99
	30-BH101_0.9-1.0	SE218963.004	%	60 - 130%	114
	30-BH101_4.4-4.5	SE218963.005	%	60 - 130%	80
	30-BH102M 0.2-0.3	SE218963.006	%	60 - 130%	89
	30-BH102M_0.5-0.6	SE218963.007	%	60 - 130%	95
	30-BH102M 2.0-2.1	SE218963.008	%	60 - 130%	94
	30-BH102M_4.0-4.1	SE218963.009	%	60 - 130%	93
	30-BH103_0.3-0.4	SE218963.010	%	60 - 130%	111
	30-BH103 0.9-1.0	SE218963.011	%	60 - 130%	118
	30-BH104_0.4-0.5	SE218963.012	%	60 - 130%	124
	30-BH104_2.0-2.1	SE218963.013	%	60 - 130%	121
	30-BH104_2.7-2.5	SE218963.014	%	60 - 130%	120
	30-BH105_0.4-0.5	SE218963.015	%	60 - 130%	129
	30-BH106M 0.3-0.4	SE218963.016	%	60 - 130%	133 ①
	30-BH106M 1.1-1.2	SE218963.017	%	60 - 130%	121
	30-BH106M_1.9-2.0	SE218963.018	%	60 - 130%	120
	30-BH106M_3.4-3.5	SE218963.019	%	60 - 130%	114
	30-BH107 0.3-0.4	SE218963.020	%	60 - 130%	129
	30-BH107_0.9-1.0	SE218963.021	%	60 - 130%	72
	30-BH107_2.3-2.4	SE218963.022	%	60 - 130%	83
	30-BH108_0.2-0.3	SE218963.023	% %	60 - 130%	89
	30-BH108_0.4-0.5	SE218963.024	%	60 - 130%	85
	30-BH108_1.2-1.3	SE218963.025	% %	60 - 130%	86
	30-BH108_2.7-2.8	SE218963.026	% %	60 - 130%	78
	30-BH109_0.3-0.4	SE218963.027	% 	60 - 130%	88
	30-BH110M_0.2-0.3	SE218963.028	% %	60 - 130%	85
		SE218963.029	% %	60 - 130%	89
	30-BH110M_1.4-1.5	SEZ 10903.029	70	00 - 130%	09

4/5/2021 Page 14 of 33



Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB223705.001	Mercury	mg/kg	0.05	<0.05
LB223706.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil Sample Number

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LUK	Result
LB223477.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	97
LB223478.001	Surrogates	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
LB223476.001		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor		0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
			mg/kg		
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	_	99

OF Festicides III Soil			Menic	0. ME-(AU)-[ENV]AN420
Sample Number	Parameter	Units	LOR	Result
LB223477.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2

4/5/2021 Page 15 of 33



Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

OP Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

•	*				
Sample Number		Parameter	Units	LOR	Result
LB223477.001		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	98
		d14-p-terphenyl (Surrogate)	%	-	94
B223478.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	98
		d14-p-terphenyl (Surrogate)	%	-	100

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB223477.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	104
		2-fluorobiphenyl (Surrogate)	%	-	98
		d14-p-terphenyl (Surrogate)	%	-	94
LB223478.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8

4/5/2021 Page 16 of 33



Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB223478.001	Surrogates	d5-nitrobenzene (Surrogate)	%	-	105
		2-fluorobiphenyl (Surrogate)	%	-	98
		d14-p-terphenyl (Surrogate)	%	-	100

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB223477.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	<u>-</u>	97
LB223478.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	99

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

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Sample Number	Parameter	Units	LOR	Result
LB223701.001	Arsenic, As	mg/kg		<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB223704.001	Arsenic, As	mg/kg	1 0.3 0.5 0.5 0.5 1 2 1 0.3 0.5 0.5 0.5	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	_ Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB223477.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110
LB223478.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

4/5/2021 Page 17 of 33





Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
.B223479.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	81
		d8-toluene (Surrogate)	%	-	80
		Bromofluorobenzene (Surrogate)	%	-	92
	Totals	Total BTEX	mg/kg	0.6	<0.6
B223484.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
	1 Monocyclic Aromatic Benzene Hydrocarbons Toluene Ethylbenzene m/p-xylene	mg/kg	0.2	<0.2	
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	130
		d8-toluene (Surrogate)	%	-	106
		Bromofluorobenzene (Surrogate)	%	-	97
	Totals	Total BTEX	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB223479.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	81
LB223484.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	130

4/5/2021 Page 18 of 33



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218963.010	LB223706.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE218963.019	LB223706.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE218963.020	LB223705.014	Mercury	mg/kg	0.05	0.05	<0.05	141	8
SE218963.029	LB223705.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218952.001	LB223487.011	% Moisture	%w/w	1	11.9	14.6	38	20
SE218963.009	LB223487.022	% Moisture	%w/w	1	13.4	14.1	37	5
SE218963.019	LB223662.011	% Moisture	%w/w	1	23.4	23.3	34	0
SE218963.029	LB223662.022	% Moisture	%w/w	1	18.3	18.8	35	3

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218952.001	LB223477.014		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	148	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	148	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	144	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	144	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	196	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	1
SE218963.023	LB223478.029		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	165	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	165	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor		0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			p,p-00E Dieldrin	mg/kg	0.1	<0.1	<0.1	200	0
				mg/kg		<0.2		200	0
			Endrin	mg/kg	0.2		<0.2		
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0

4/5/2021 Page 19 of 33



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218963.023	LB223478.029		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	179	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
	Surr	rogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	2

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218952.001	LB223477.027	Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218952.001	LB223477.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.1	<0.1	135	0
			Pyrene	mg/kg	0.1	0.1	0.1	125	10
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	184	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	197	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>200</td><td>0</td></lor=0<>	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td><0.3</td><td><0.3</td><td>134</td><td>0</td></lor=lor<>	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>175</td><td>0</td></lor=lor>	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	30	7
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.6	0.5	30	8
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	10
SE218963.009	LB223477.028		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0

4/5/2021 Page 20 of 33



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicat <u>e</u>	Criteria %	RPD '
E218963.009	LB223477.028		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
E218963.020			Benzo(a)anthracene	mg/kg	0.1	<0.1			0
			Chrysene	mg/kg	0.1	<0.1			0
			Benzo(b&j)fluoranthene	mg/kg	0.1				0
			Benzo(k)fluoranthene	mg/kg	0.1		0.1 <0.1	0	
			Benzo(a)pyrene	mg/kg	0.1				0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1			0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1			0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>200</td><td>0</td></lor=0<>	mg/kg	0.2	<0.2	<0.2	200	0
				TEQ (mg/kg)	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td><0.3</td><td><0.3</td><td>134</td><td>0</td></lor=lor<>	mg/kg	0.3	<0.3	<0.3	134	0
				TEQ (mg/kg)	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>175</td><td>0</td></lor=lor>	mg/kg	0.2	<0.2	<0.2	175	0
				TEQ (mg/kg)	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8		200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5			20
			2-fluorobiphenyl (Surrogate)	mg/kg		0.5			24
			d14-p-terphenyl (Surrogate)	mg/kg		0.5			26
F218963 020	LB223478.027		Naphthalene	mg/kg	0.1	<0.1			0
L2 10303.020	LD225410.U21								0
			2-methylnaphthalene	mg/kg	0.1				
			1-methylnaphthalene	mg/kg	0.1	<0.1			0
			Acenaphthylene	mg/kg	0.1	<0.1			0
			Acenaphthene	mg/kg	0.1	<0.1			0
			Fluorene	mg/kg	0.1	<0.1	<0.1		0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.1	0.1	99	7
			Pyrene	mg/kg	0.1	0.2	0.2	92	10
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	169	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	162	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	<0.1	132	4
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1		200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1			0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1			0
			Dibenzo(ah)anthracene	mg/kg	0.1				0
			Benzo(ghi)perylene	mg/kg	0.1				0
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td></td><td></td><td></td><td>0</td></lor=0<>	mg/kg	0.2				0
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td><0.3</td><td></td><td></td><td>0</td></lor=lor<>	mg/kg	0.3	<0.3			0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td></td><td></td><td>0</td></lor=lor>	mg/kg	0.2	<0.2			0
			Total PAH (18)	mg/kg	0.8	<0.8			0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5			4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	4
	<u> </u>		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
E218963.028	LB223478.028		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.1	0.3	80	66
			Anthracene		0.1	<0.1	<0.1	183	0
				mg/kg					
			Fluoranthene	mg/kg	0.1	0.2	0.3	67	25
			Pyrene	mg/kg	0.1	0.3	0.3	66	14
			Benzo(a)anthracene	mg/kg	0.1	0.1	0.1	113	21
			Chrysene	mg/kg	0.1	<0.1	0.1	115	31
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.1	116	39
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	160	0
						<0.1		135	2

4/5/2021 Page 21 of 33





Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218963.028	LB223478.028		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	196	0
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>200</td><td>0</td></lor=0<>	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td><0.3</td><td><0.3</td><td>132</td><td>0</td></lor=lor<>	mg/kg	0.3	<0.3	<0.3	132	0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>135</td><td>0</td></lor=lor>	mg/kg	0.2	<0.2	<0.2	135	0
			Total PAH (18)	mg/kg	0.8	<0.8	1.4	104	57
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	16

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

	D 11 4		- ·		1.00	0:: 1		0 14 1 04	
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218952.001	LB223477.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	1
E218963.023	LB223478.029		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	2

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218963.010	LB223701.014	Arsenic, As	mg/kg	1	5	5	51	8
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	2.4	2.6	50	7
		Copper, Cu	mg/kg	0.5	5.7	5.8	39	3
		Nickel, Ni	mg/kg	0.5	1.0	1.2	74	17
		_Lead, Pb	mg/kg	1	19	20	35	6
		Zinc, Zn	mg/kg	2	15	18	42	14
SE218963.019	LB223701.024	Arsenic, As	mg/kg	1	10	9	41	8
		Cadmium, Cd	mg/kg	0.3	0.7	1.8	54	84 ②
		Chromium, Cr	mg/kg	0.5	160	63	30	85 ②
		Copper, Cu	mg/kg	0.5	290	400	30	32 ②
		Nickel, Ni	mg/kg	0.5	40	30	31	29
		Lead, Pb	mg/kg	1	200	250	30	24
		Zinc, Zn	mg/kg	2	410	560	30	32 ②
SE218963.029	LB223704.024	Arsenic, As	mg/kg	1	5	5	50	7
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	10	5.9	36	52 ②
		Copper, Cu	mg/kg	0.5	9.2	9.4	35	2
		Nickel, Ni	mg/kg	0.5	1.7	0.9	69	58
		Lead, Pb	mg/kg	1	20	22	35	10
		Zinc, Zn	mg/kg	2	14	12	45	14

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original Duplicate Parameter Units LOR

4/5/2021 Page 22 of 33



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Dunlicato	Criteria %	RPD %
SE218952.001	LB223477.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
52210002.001	20220777.014		TRH C15-C28	mg/kg	45	51	<45	129	13
			TRH C29-C36	mg/kg	45	110	91	76	14
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	160	<110	119	35
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	120	96	113	23
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE218963.009	LB223477.025		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	120	95	72	22
			TRH C29-C36	mg/kg	45	170	130	60	28
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	290	230	73	25
			TRH >C10-C40 Total (F bands)	mg/kg	210	240	<210	130	12
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	240	180	73	25
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE218963.020	LB223478.027		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE218963.028	LB223478.028		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218952.001	LB223484.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.3	11.6	50	2
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.4	50	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.6	6.7	50	2
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE218963.009	LB223484.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.5	12.5	50	8

4/5/2021 Page 23 of 33







Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218963.009	LB223484.025	Surrogates	d8-toluene (Surrogate)	mg/kg	-	9.3	10.1	50	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.3	6.6	50	4
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE218963.019	LB223479.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.3	12.9	50	5
			d8-toluene (Surrogate)	mg/kg	-	11.4	12.2	50	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.6	12.4	50	6
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE218963.029	LB223479.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	8.3	50	2
			d8-toluene (Surrogate)	mg/kg	-	8.9	8.8	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.8	6.6	50	3
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218952.001	LB223484.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.3	11.6	30	2
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.4	30	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.6	6.7	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE218963.009	LB223484.025		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.5	12.5	30	8
			d8-toluene (Surrogate)	mg/kg	-	9.3	10.1	30	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.3	6.6	30	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE218963.019	LB223479.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.3	12.9	30	5
			d8-toluene (Surrogate)	mg/kg	-	11.4	12.2	30	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.6	12.4	30	6
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE218963.029	LB223479.025		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	8.3	30	2
			d8-toluene (Surrogate)	mg/kg	-	8.9	8.8	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.8	6.6	30	3
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

4/5/2021 Page 24 of 33





LABORATORY CONTROL SAMPLES

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil	Method: ME-(AU)-IENVIAN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223705.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	94
LB223706.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	100

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223477.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	88
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	83
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	81
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	81
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	88
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	63
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	95
LB223478.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	100
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	100
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	102
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	100
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	111
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	103
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	99

OP Pesticides in Soil

							•	
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223477.002		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	80
		Diazinon (Dimpylate)	mg/kg	0.5	2.4	2	60 - 140	121
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.0	2	60 - 140	99
		Ethion	mg/kg	0.2	1.8	2	60 - 140	88
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	104
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102
LB223478.002		Dichlorvos	mg/kg	0.5	2.2	2	60 - 140	108
		Diazinon (Dimpylate)	mg/kg	0.5	2.4	2	60 - 140	122
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.6	2	60 - 140	131
		Ethion	mg/kg	0.2	2.0	2	60 - 140	99
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96

mg/kg

0.5

0.5

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

d14-p-terphenyl (Surrogate)

Method: ME-(AU)-[ENV]AN420

99

40 - 130

Method: ME-(AU)-[ENV]AN420

Ozwania Nawahan		P	Units	LOD	Danult	Francisco d	Quitania 0/	D0/
Sample Number		Parameter		LOR	Result	Expected	Criteria %	Recovery %
LB223477.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	111
		Acenaphthylene	mg/kg	0.1	4.8	4	60 - 140	120
		Acenaphthene	mg/kg	0.1	4.8	4	60 - 140	121
		Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	115
		Anthracene	mg/kg	0.1	4.3	4	60 - 140	108
		Fluoranthene	mg/kg	0.1	4.3	4	60 - 140	107
		Pyrene	mg/kg	0.1	4.6	4	60 - 140	115
		Benzo(a)pyrene	mg/kg	0.1	4.7	4	60 - 140	117
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	106
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	104
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102
LB223478.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	112
		Acenaphthylene	mg/kg	0.1	4.0	4	60 - 140	101
		Acenaphthene	mg/kg	0.1	4.7	4	60 - 140	117
		Phenanthrene	mg/kg	0.1	4.7	4	60 - 140	117
		Anthracene	mg/kg	0.1	4.7	4	60 - 140	118
		Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	110
		Pyrene	mg/kg	0.1	4.9	4	60 - 140	124
		Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	104
	gatoo	2-fluorobiphenyl (Surrogate)	mg/kg		0.5	0.5	40 - 130	96
		d14-p-terphenyl (Surrogate)	mg/kg		0.5	0.5	40 - 130	99
		u 14-p-terprienyi (ourrogate)	nig/kg	-	0.5	0.5	40 - 130	39

PCBs in Soil

Sample Number Units LOR Method: ME-(AU)-[ENV]AN420

4/5/2021 Page 25 of 33



LABORATORY CONTROL SAMPLES

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

PCBs in Soil (continued)	Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223477.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	100
LB223478.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	118

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223701.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	109
	Cadmium, Cd	mg/kg	0.3	4.3	4.81	70 - 130	90
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	107
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	105
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	280	273	80 - 120	103
LB223704.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	111
	Cadmium, Cd	mg/kg	0.3	4.3	4.81	70 - 130	90
	Chromium, Cr	mg/kg	0.5	42	38.31	80 - 120	110
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	105
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	290	273	80 - 120	104

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223477.002		TRH C10-C14	mg/kg	20	42	40	60 - 140	105
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	40	40	60 - 140	100
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	115
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80
LB223478.002		TRH C10-C14	mg/kg	20	44	40	60 - 140	110
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	103
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	93
	TRH F Bands	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	103
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	85

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223479.002	Monocyclic	Benzene	mg/kg	0.1	3.4	5	60 - 140	69
	Aromatic	Toluene	mg/kg	0.1	3.6	5	60 - 140	73
		Ethylbenzene	mg/kg	0.1	3.6	5	60 - 140	71
		m/p-xylene	mg/kg	0.2	7.1	10	60 - 140	71
		o-xylene	mg/kg	0.1	3.7	5	60 - 140	74
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	10	70 - 130	83
		d8-toluene (Surrogate)	mg/kg	-	8.2	10	70 - 130	82
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
LB223484.002	Monocyclic	Benzene	mg/kg	0.1	4.6	5	60 - 140	92
	Aromatic	Toluene	mg/kg	0.1	4.8	5	60 - 140	95
		Ethylbenzene	mg/kg	0.1	6.6	5	60 - 140	132
		m/p-xylene	mg/kg	0.2	13	10	60 - 140	132
		o-xylene	mg/kg	0.1	6.7	5	60 - 140	133
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.6	10	70 - 130	126
		d8-toluene (Surrogate)	mg/kg	-	10.8	10	70 - 130	108
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.4	10	70 - 130	84

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

								.,
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223479.002		TRH C6-C10	mg/kg	25	72	92.5	60 - 140	78
		TRH C6-C9	mg/kg	20	59	80	60 - 140	74
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	10	70 - 130	83
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	51	62.5	60 - 140	81
LB223484.002		TRH C6-C10	mg/kg	25	80	92.5	60 - 140	86

4/5/2021 Page 26 of 33



LABORATORY CONTROL SAMPLES

SE218963 R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-[ENV]AN433

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Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223484.002		TRH C6-C9	mg/kg	20	53	80	60 - 140	66
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.6	10	70 - 130	126
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.4	10	70 - 130	84
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	44	62.5	60 - 140	70

4/5/2021 Page 27 of 33

Method: ME-(AU)-[ENV]AN420



OC Pesticides in Soil

MATRIX SPIKES

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Method: ME-(AU)-[ENV]AN312 Mercury in Soil

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218853A.009	LB223705.004	Mercury	mg/kg	0.05	0.25	<0.05	0.2	101
SE218963.001	LB223706.004	Mercury	mg/kg	0.05	0.26	0.12	0.2	74

QC Sample Sample Number Parameter Units LOR Result Original Spike Recovery%

QC Sample	Sample Number	raiailietei	Ullits	LUK	Result	Original	Spike	Recovery //
SE219002.001	LB223477.004	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	95
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	89
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	88
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	85
		Endrin	mg/kg	0.2	<0.2	<0.2	0.2	92
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.1	<0.1	0.2	72
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
		Total CLP OC Pesticides	mg/kg	1	1	<1	-	-

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN420

mg/kg

0.15

QC Sample	Sample Number		Parameter		Units	LOR	Result	Original	Spike	Recovery%
SE219002.001	LB223477.004		Dichlorvos		mg/kg	0.5	1.6	<0.5	2	79
			Dimethoate		mg/kg	0.5	<0.5	<0.5	-	-
			Diazinon (Dimpylate)		mg/kg	0.5	2.6	<0.5	2	129
			Fenitrothion		mg/kg	0.2	<0.2	<0.2	-	-
			Malathion		mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)		mg/kg	0.2	2.3	<0.2	2	113
			Parathion-ethyl (Parathion)		mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl		mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion		mg/kg	0.5	<0.5	<0.5	-	-
			Ethion		mg/kg	0.2	2.2	<0.2	2	110
			Azinphos-methyl (Guthion)		mg/kg	0.2	<0.2	<0.2	-	-
	_		Total OP Pesticides*	1	mg/kg	1.7	8.6	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)		mg/kg	-	0.5	0.5	-	100
			d14-p-terphenyl (Surrogate)		mg/kg	-	0.5	0.5	-	102

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Surrogates

Tetrachloro-m-xylene (TCMX) (Surrogate)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218963.010	LB223478.004	Naphthalene	mg/kg	0.1	4.5	<0.1	4	112
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.1	<0.1	4	102
		Acenaphthene	mg/kg	0.1	4.9	<0.1	4	122
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.3	<0.1	4	105

4/5/2021 Page 28 of 33



MATRIX SPIKES

SGS

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218963.010	LB223478.004		Anthracene	mg/kg	0.1	4.3	<0.1	4	107
			Fluoranthene	mg/kg	0.1	4.4	0.3	4	104
			Pyrene	mg/kg	0.1	4.7	0.4	4	107
			Benzo(a)anthracene	mg/kg	0.1	0.2	0.2	-	-
			Chrysene	mg/kg	0.1	0.2	0.2	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	0.3	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	0.1	0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.3	0.2	4	103
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.2	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.2	-	-
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>4.4</td><td>0.3</td><td>-</td><td>-</td></lor=0<>	TEQ (mg/kg)	0.2	4.4	0.3	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>4.5</td><td>0.4</td><td>-</td><td>-</td></lor=lor<>	TEQ (mg/kg)	0.3	4.5	0.4	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>4.5</td><td>0.3</td><td>-</td><td>-</td></lor=lor>	TEQ (mg/kg)	0.2	4.5	0.3	-	-
			Total PAH (18)	mg/kg	0.8	37	2.0	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	91
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	91
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	85
SE219002.001	LB223477.004		Naphthalene	mg/kg	0.1	5.0	<0.1	4	124
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.2	<0.1	4	105
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	110
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	5.1	<0.1	4	125
			Anthracene	mg/kg	0.1	4.9	<0.1	4	122
			Fluoranthene	mg/kg	0.1	4.1	0.2	4	97
			Pyrene	mg/kg	0.1	4.7	0.3	4	110
			Benzo(a)anthracene	mg/kg	0.1	0.1	0.1	-	-
			Chrysene	mg/kg	0.1	0.1	0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	0.2	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.2	-	-
			Benzo(a)pyrene	mg/kg	0.1	5.2	0.1	4	126
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>5.2</td><td><0.2</td><td>-</td><td>-</td></lor=0<>	TEQ (mg/kg)	0.2	5.2	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>5.3</td><td><0.3</td><td>-</td><td>-</td></lor=lor<>	TEQ (mg/kg)	0.3	5.3	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>5.2</td><td><0.2</td><td>-</td><td>-</td></lor=lor>	TEQ (mg/kg)	0.2	5.2	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	38	1.0	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	106
			2-fluorobiphenyl (Surrogate)	mg/kg		0.5	0.5	-	100
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	102

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE219002.001	LB223477.004	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	104
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
	Surre	ogates Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	98

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

QC Sample	Sample Number	Parameter	Units	LOR

Method: ME-(AU)-[ENV]AN040/AN320

4/5/2021 Page 29 of 33



MATRIX SPIKES

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218853A.009	LB223704.004	Arsenic, As	mg/kg	1	45	8	50	75
		Cadmium, Cd	mg/kg	0.3	38	<0.3	50	75
		Chromium, Cr	mg/kg	0.5	54	23	50	63 ④
		Copper, Cu	mg/kg	0.5	47	5.6	50	83
		Nickel, Ni	mg/kg	0.5	46	7.5	50	76
		Lead, Pb	mg/kg	1	55	24	50	63 ④
		Zinc, Zn	mg/kg	2	59	22	50	75

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218963.010	LB223478.004		TRH C10-C14	mg/kg	20	41	<20	40	103
			TRH C15-C28	mg/kg	45	<45	<45	40	103
			TRH C29-C36	mg/kg	45	<45	<45	40	88
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	39	<25	40	98
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	34	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	108
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE219002.001	LB223477.004		TRH C10-C14	mg/kg	20	41	<20	40	103
			TRH C15-C28	mg/kg	45	51	<45	40	100
			TRH C29-C36	mg/kg	45	<45	<45	40	108
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	39	<25	40	98
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	39	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	100
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Numbe	r	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218963.010	LB223479.004	Monocyclic	Benzene	mg/kg	0.1	3.2	<0.1	5	65
		Aromatic	Toluene	mg/kg	0.1	3.5	<0.1	5	70
			Ethylbenzene	mg/kg	0.1	3.5	<0.1	5	70
			m/p-xylene	mg/kg	0.2	7.0	<0.2	10	70
			o-xylene	mg/kg	0.1	3.6	<0.1	5	72
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg		8.2	11.5	10	82
			d8-toluene (Surrogate)	mg/kg		8.1	11.1	10	81
			Bromofluorobenzene (Surrogate)	mg/kg		8.8	10.9	10	88
		Totals	Total Xylenes	mg/kg	0.3	11	<0.3	-	-
			Total BTEX	mg/kg	0.6	21	<0.6	-	-
SE219002.001	LB223484.004	Monocyclic	Benzene	mg/kg	0.1	3.8	<0.1	5	76
		Aromatic	Toluene	mg/kg	0.1	4.2	<0.1	5	84
			Ethylbenzene	mg/kg	0.1	6.0	<0.1	5	120
			m/p-xylene	mg/kg	0.2	12	<0.2	10	120
			o-xylene	mg/kg	0.1	6.2	<0.1	5	123
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	10.7	10	114
			d8-toluene (Surrogate)	mg/kg	-	9.9	8.5	10	99
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.2	7.3	10	72
		Totals	Total Xylenes	mg/kg	0.3	18	<0.3	-	-
			Total BTEX	mg/kg	0.6	32	<0.6	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218963.010	LB223479.004		TRH C6-C10	mg/kg	25	68	<25	92.5	73
			TRH C6-C9	mg/kg	20	55	<20	80	69
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	11.5	10	82
			d8-toluene (Surrogate)	mg/kg	-	8.1	11.1	10	81

4/5/2021 Page 30 of 33







Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-[ENV]AN433

,									, , , , , , , , , , , , , , , , , , , ,
QC Sample Sample Numbe		r	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218963.010	LB223479.004	Surrogates	Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	10.9	-	88
		VPH F	Benzene (F0)	mg/kg	0.1	3.2	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	47	<25	62.5	75
SE219002.001 LB223484.004			TRH C6-C10	mg/kg	25	72	<25	92.5	78
			TRH C6-C9	mg/kg	20	52	<20	80	65
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	10.7	10	114
			d8-toluene (Surrogate)	mg/kg	-	9.9	8.5	10	99
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.2	7.3	-	72
			Benzene (F0)	mg/kg	0.1	3.8	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	40	<25	62.5	64

4/5/2021 Page 31 of 33



MATRIX SPIKE DUPLICATES

SE218963 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = $100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

4/5/2021 Page 32 of 33



FOOTNOTES



Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

- * NATA accreditation does not cover the performance of this service.
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ® Results less than 5 times LOR preclude acceptance criteria for RPD.
- Recovery failed acceptance criteria due to matrix interference.
- ® Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- © LOR was raised due to sample matrix interference.
- ① LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ® Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ® Recovery failed acceptance criteria due to sample heterogeneity.
- (nequired dilution).
- † Refer to relevant report comments for further information.

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4/5/2021 Page 33 of 33





SGS Alexandria Environmental



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LABORATORY DETAILS

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Samples 28

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SGS Reference SE218963 R0
Date Received 23 Apr 2021

Date Reported 04 May 2021

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

PFAS subcontracted to SGS Melbourne, Unit 10/585 Blackburn Road Notting Hill VIC 3168, NATA Accreditation Number 2562, Site number 14420. Final report No: ME320181

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam.

SIGNATORIES

Akheeqar BENIAMEEN Chemist

Bennet LO

Senior Organic Chemist/Metals Chemis

Huong CRAWFORD Production Manager

S. Ravenoln.

Ly Kim HA Organic Section Head

Kmln

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- RESULTS -- Results -- Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w
SE218963.002	30-BH101_0.2-0.	Soil	173g Clay, Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.003	30-BH101_0.5-0. 6	Soil	126g Clay, Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.004	30-BH101_0.9-1. 0	Soil	189g Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.005	30-BH101_4.4-4. 5	Soil	169g Clay, Sand, Soil, Rocks, Plaster	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218963.006	30-BH102M_0.2- 0.3	Soil	227g Sand, Shells	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.007	30-BH102M_0.5- 0.6	Soil	235g Clay	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.008	30-BH102M_2.0- 2.1	Soil	147g Clay, Sand, Soil, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Synthetic Mineral Fibres Detected	<0.01
SE218963.009	30-BH102M_4.0- 4.1	Soil	194g Clay, Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.010	30-BH103_0.3-0. 4	Soil	217g Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.011	30-BH103_0.9-1. 0	Soil	237g Clay, Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.012	30-BH104_0.4-0. 5	Soil	144g Sand, Rocks, Cement mixture	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.013	30-BH104_2.0-2. 1	Soil	252g Clay, Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.014	30-BH104_2.7-2. 5	Soil	184g Clay, Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.015	30-BH105_0.4-0. 5	Soil	163g Clay, Sand, Rocks	20 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.016	30-BH106M_0.3- 0.4	Soil	188g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.017	30-BH106M_1.1- 1.2	Soil	211g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.018	30-BH106M_1.9- 2.0	Soil	180g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.019	30-BH106M_3.4- 3.5	Soil	157g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.020	30-BH107_0.3-0. 4	Soil	198g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.021	30-BH107_0.9-1. 0	Soil	234g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.022	30-BH107_2.3-2. 4	Soil	204g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.023	30-BH108_0.2-0. 3	Soil	161g Clay	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.024	30-BH108_0.4-0. 5	Soil	208g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.025	30-BH108_1.2-1. 3	Soil	208g Clay	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.026	30-BH108_2.7-2. 8	Soil	240g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01

4/05/2021 Page 2 of 4



SGS

ANALYTICAL REPORT

RESULTS -	ation in soil				Method AN602	
Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE218963.027	30-BH109_0.3-0. 4	Soil	148g Clay, Sand, Soil, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218963.028	30-BH110M_0.2- 0.3	Soil	188g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218963.029	30-BH110M_1.4- 1.5	Soil	216g Clay	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01

4/05/2021 Page 3 of 4

SE218963 R0



METHOD SUMMARY

METHOD -

METHODOLOGY SUMMARY

AN602

Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.

AN602

Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.

AN602

AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602

The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):
- (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and
- (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES -

Amosite - Brown Asbestos NA - Not Analysed
Chrysotile - White Asbestos LNR - Listed, Not Required

Crocidolite - Blue Asbestos * - NATA accreditation does not cover the performance of this service .

Amphiboles - Amosite and/or Crocidolite ** - Indicative data, theoretical holding time exceeded.

*** - Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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4/05/2021 Page 4 of 4



Laboratory





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SE218963 Order Number Samples

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SGS Reference ME320181 R0 28 Apr 2021 Date Received

03 May 2021 Date Reported

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(14420).

PFAS samples was analysed from GLASS jar instead of plastic. Also, ME320181.012 was broken upon arrival. Contents were transferred to a

MA1523: Some surrogate recovery out of range due to the sample matrix.

SIGNATORIES

Adam ATKINSON

Australian Chemistry Manager

SGS Australia Pty Ltd ABN 44 000 964 278



ME320181 R0

Performant Polymorality Substances (PFAS) in Solid Samples	Parameter	Units	Sample Number Sample Matrix Sample Date Sample Name LOR	Soil 20 Apr 2021	ME320181.002 Soil 20 Apr 2021 SE218963.002	ME320181.003 Soil 20 Apr 2021 SE218963.003	ME320181.004 Soil 20 Apr 2021 SE218963.004
Public Description of PFMA)				sted: 30/4/2021			
Public Description of PFMA)	Perfluorohutanoic acid (PERA)	ma/ka	0.0016		<0.0016	_	_
Petition Contention							-
Performantance and PFTPAD						_	_
Perfuncionance Actor PTAN						_	_
Perfuncionation and PPNAI				-		-	-
Perfouncementance and PFFAN)				-		-	-
Perfolance content of (PTIAN)	Perfluorodecanoic acid (PFDA)		0.0016	-	<0.0016	-	-
Performedeance and (PFTICA)	Perfluoroundecanoic acid (PFUnA)		0.0016	-	<0.0016	-	-
Performancement and (PPTICA)	Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	<0.0016	-	-
Perfunción la migra	Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	<0.0016	-	-
Perfuncionation (PPES)	Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	<0.0016	-	-
Perhuncupaters submarie (PFNeS) mg/ng 0.0016 0.00	Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	<0.0032	-	-
Perfusirentesiane sulfarate (PFHSS) mg/kg 0.016 - 4.0016 - - - - - - - - -	Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluence teatre selferate (PFPS) mg/sg 0.0016	Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorocotans sufromate (PFOS) mg/kg	Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	<0.0016	-	-
Sum PFOS and PFNXS mg/kg 0.0016 - 400016 - 0 - 0 Perfluszorosane sulforate (PFNS) mg/kg 0.0016 - 0 - 0 - 0 Perfluszorosane sulforate (PFDS) mg/kg 0.0016 - 0 - 0 - 0 H1,112-12-PERFluszobeane sulforate (PCDS) mg/kg 0.0016 - 0 - 0 - 0 H1,112-12-PERFlurosobeane sulforate (PCDS) mg/kg 0.0016 - 0 - 0 - 0 H1,112-12-PERFlurosobeane sulforate (PCDS) mg/kg 0.0016 - 0 - 0 - 0 H1,112-12-PERFlurosobeane sulforate (PCDSA) mg/kg 0.0016 - 0 - 0 - 0 - 0 MEMISYPHEWOODER (PCDSA) mg/kg 0.0016 - 0	Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	<0.0016	-	-
Perfusion/consiste sulforate (PFNS) mg/kg 0.0016 . 0.40016 . 0.0016	Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	<0.0016	-	-
Perflucacidacians sulforate (PFDS) mg/kg 0.0016 .	Sum PFOS and PFHXS	mg/kg	0.0016	-	<0.0016	-	-
Perfluorodoseane sufforate (PFDoS)	Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	<0.0016	-	-
111112112141-Perfluorohoxene sulforante (42) (42 FTS) mg/kg 0.0016 . 4.0016 	Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	<0.0016	-	-
111,112,1214-Perfluorocctane sulfonate (8-2) (8-2 FTS)	Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	<0.0016	-	-
111.11.21.21.14.Perthurordecane sufforante (8.2) (8.2 FTS)	1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoroctane sulfonamide (PFOSA)	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	<0.0016	-	-
N-Methylperfluoroctane sulfonamide (N-MetPOSA) mg/kg 0.008 -	1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	<0.0016	-	-
N=Errylsperifluoroctane sulfonamide (N=ErGSA)	Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	<0.0016	-	-
2.(N.Methylperfluorooctane sulfonamido)-ethanol mg/kg 0.016 - 40.016 - - 2.(N.Ethylperfluorooctane sulfonamido)-ethanol mg/kg 0.016 - 40.016 - - N.Methylperfluorooctane sulfonamidoacetic acid mg/kg 0.008 - 40.008 - - H.Ethylperfluorooctane sulfonamidoacetic Acid mg/kg 0.008 - 40.008 - - (13C4-PFRA) Isotopically Labelled Internal Recovery % - 101 - - (13C4-PFRA) Isotopically Labelled Internal Recovery % - 140 - - (13C4-PFRA) Isotopically Labelled Internal Recovery % - 110 - - (13C4-PFRA) Isotopically Labelled Internal Recovery % - 1110 - - (13C4-PFRA) Isotopically Labelled Internal Recovery % - 1111 - - (13C4-PFRA) Isotopically Labelled Internal Recovery % - 115 - - (13C4-PFRA) Isotopically Labelled Internal Recovery %<	N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	<0.008	-	-
2.N-Ethylperfluorooctane sulfonamido)-ethanol mg/kg 0.018 - 4.0.018	N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	<0.008	-	-
Nethylperfluoroctanesulfonamidoacetic acid mg/lkg	2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	<0.016	-	-
N-Ethylperfluoroctanesulfonamidoacetic Acid mg/kg 0.008 - \$0.008 -	2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	<0.016	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery % - 101 - - (13C5-PFPPA) Isotopically Labelled Internal Recovery % - 140 - - (13C5-PFPBA) Isotopically Labelled Internal Recovery % - 140 - - (13C4-PFDA) Isotopically Labelled Internal Recovery % - 1110 - - (13C5-PFDA) Isotopically Labelled Internal Recovery % - 106 - - (13C6-PFDA) Isotopically Labelled Internal Recovery % - 105 - - (13C6-PFDA) Isotopically Labelled Internal Recovery % - 103 - - (13C6-PFDA) Isotopically Labelled Internal Recovery % - 95 - - (13C2-PFTEAA) Isotopically Labelled Internal Recovery % - 95 - - (13C2-PFTEAA) Isotopically Labelled Internal Recovery % - 97 - - (13C3-PFTEAA) Isotopically Labelled Internal Recovery % - 97 - -	N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	<0.008	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	N-Ethylperfluorooctanesulfonamidoacetic Acid		0.008	-	<0.008	-	-
(13C3-PFHxA) Isotopically Labelled Internal Recovery	(13C4-PFBA) Isotopically Labelled Internal Recovery		-	-		-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery			-	-		-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery % - - 1111 - - (13C9-PFNA) Isotopically Labelled Internal Recovery % - - 1055 - - (13C9-PFNA) Isotopically Labelled Internal Recovery % - - 1111 - - (13C9-PFUA) Isotopically Labelled Internal Recovery % - - 103 - - (13C2-PFDA) Isotopically Labelled Internal Recovery % - - 95 - - (13C2-PFHxDA) Isotopically Labelled Internal Recovery % - - 45 - - (13C2-PFHxDA) Isotopically Labelled Internal Recovery % - - 22 - - (13C3-PFHxS) Isotopically Labelled Internal Recovery % - - 107 - - (13C3-PFHxS) Isotopically Labelled Internal Recovery % - - 107 - - (13C3-PFSA) Isotopically Labelled Internal Recovery % - - 101 - - <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td>-</td> <td>-</td>			-	-		-	-
(13C9-PFNA)			-	-		-	-
13C6-PFDA Isotopically Labelled Internal Recovery							
(13C7-PFUdA) Isotopically Labelled Internal Recovery			-	-		-	-
(13C2-PFDA) Isotopically Labelled Internal Recovery							
(13C2_PFTeDA) Isotopically Labelled Internal Recovery							
(13C2-PFHxDA) Isotopically Labelled Internal Recovery							
(13C3-PFBS) Isotopically Labelled Internal Recovery % - - 107 - - (13C3-PFHxS) Isotopically Labelled Internal Recovery % - - 97 - - (13C3-PFHxS) Isotopically Labelled Internal Recovery % - - 101 - - (13C2-4:2 FTS) Isotopically Labelled Internal Recovery % - - 77 - - (13C2-6:2 FTS) Isotopically Labelled Internal Recovery % - - 38 - - (13C2-8:2 FTS) Isotopically Labelled Internal Recovery % - - 41 - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 80 - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 80 - - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 80 - - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 49 - - - (D5-N-EIFOSE) Isotopically Labelled Internal Recovery <td><u> </u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td>	<u> </u>						-
(13C3-PFHxS) Isotopically Labelled Internal Recovery % - - 97 - - (13C8-PFOS) Isotopically Labelled Internal Recovery % - - 101 - - (13C2-4:2 FTS) Isotopically Labelled Internal Recovery % - - 77 - - (13C2-6:2 FTS) Isotopically Labelled Internal Recovery % - - 38 - - (13C2-8:2 FTS) Isotopically Labelled Internal Recovery % - - 41 - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 80 - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 80 - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 41 - - (13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 49 - - - (D5-N-EFOSA) Isotopically Labelled Internal Recovery % - - - - <	· · · · · · · · · · · · · · · · · · ·						-
(13C8-PFOS) Isotopically Labelled Internal Recovery							
13C2-4:2 FTS Isotopically Labelled Internal Recovery							
13C2-6:2 FTS Isotopically Labelled Internal Recovery							
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery							-
(13C8-PFOSA) Isotopically Labelled Internal Recovery % - - 80 - - (D3-N-MeFOSA) Isotopically Labelled Internal Recovery % - - 49 - - (D5-N-EtFOSA) Isotopically Labelled Internal Recovery % - - 31 - - (D7-N-MeFOSE) Isotopically Labelled Internal Recovery % - - 78 - - (D9-N-EtFOSE) Isotopically Labelled Internal Recovery % - - 56 - - (D3-N-MeFOSAA) Isotopically Labelled Internal Recovery % - - 59 - -							<u>-</u>
D3-N-MeFOSA) Isotopically Labelled Internal Recovery							
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery % - - 31 - - (D7-N-MeFOSE) Isotopically Labelled Internal Recovery % - - 78 - - (D9-N-EtFOSE) Isotopically Labelled Internal Recovery % - - 56 - - (D3-N-MeFOSAA) Isotopically Labelled Internal Recovery % - - 59 - -							
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery % - - 78 - - (D9-N-EtFOSE) Isotopically Labelled Internal Recovery % - - 56 - - (D3-N-MeFOSAA) Isotopically Labelled Internal Recovery % - - 59 - -							
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery % - - 56 - - (D3-N-MeFOSAA) Isotopically Labelled Internal Recovery % - - 59 - -						-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery % 59						-	<u>-</u>
			-	-		-	-
			-	-		-	-

Moisture Content Method: AN002 Tested: 30/4/2021



ME320181 R0

		ample Number Sample Matrix Sample Date Sample Name	Soil 20 Apr 2021	ME320181.002 Soil 20 Apr 2021 SE218963.002	ME320181.003 Soil 20 Apr 2021 SE218963.003	ME320181.004 Soil 20 Apr 2021 SE218963.004
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2	021 (continued)					
% Moisture*	%w/w	1	-	9.8	-	-

03-May-2021 Page 3 of 21



ME320181 R0

		Sample Number		ME320181.006	ME320181.007	ME320181.008
		Sample Matrix Sample Date	Soil 20 Apr 2021	Soil 20 Apr 2021	Soil 20 Apr 2021	Soil 20 Apr 2021
		Sample Name	SE218963.005	SE218963.006	SE218963.007	SE218963.008
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S	amples Method	I: MA-1523 Tes	sted: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	<0.0008	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	<0.0032	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	<0.0016	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	<0.0016	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016		<0.0016		
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	<0.0016	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	<0.0016 <0.0016	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	<0.0016	-	
Perfluoroctane sulfonamide (PFOSA) N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	<0.008	-	
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg mg/kg	0.008	-	<0.008	-	
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	<0.016	-	
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	<0.016	-	
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	_	<0.008	_	
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	_	<0.008	_	
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	0.000	-	100	-	
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	_	_	92	_	
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	_	_	138	-	
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	_	-	112	-	_
(13C4 PFOA) Isotopically Labelled Internal Recovery	%	_	_	114	-	
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	_	_	112	-	
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	_	_	110	-	_
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%		-	92	-	
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	_	-	86	-	
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	_	-	45	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	_	-	12	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	115	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	105	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	109	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	81	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	40	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	47	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	74	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	37	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	26	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	74	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	51	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	60	-	=
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	_	-	53	-	-

Moisture Content Method: AN002 Tested: 30/4/2021



ME320181 R0

	;	ample Number Sample Matrix Sample Date Sample Name	Soil 20 Apr 2021	ME320181.006 Soil 20 Apr 2021 SE218963.006	ME320181.007 Soil 20 Apr 2021 SE218963.007	ME320181.008 Soil 20 Apr 2021 SE218963.008
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/202	1 (continued)					
% Moisture*	%w/w	1	-	13.0	-	-

03-May-2021 Page 5 of 21



ME320181 R0

		Sample Number Sample Matrix Sample Date Sample Name	Soil 20 Apr 2021	ME320181.010 Soil 20 Apr 2021 SE218963.010	ME320181.011 Soil 20 Apr 2021 SE218963.011	ME320181.012 Soil 20 Apr 2021 SE218963.012
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S	amples Method:	MA-1523 Te	ested: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	-	-	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	_	_	-	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	_	_	-	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	_	_	_	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016		_		<0.0016
Perfluorodecane sulfonate (FFDS)	mg/kg	0.0016		_	_	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)		0.0016	<u> </u>	-	-	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	<0.0016
	mg/kg	0.0016	-	-	-	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg				-	
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	<0.0016
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	800.0	-	-	-	<0.008
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	800.0	-	-	-	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	<0.008
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	106
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	99
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	135
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	107
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	111
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	115
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	100
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-	-	-	89
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	86
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	49
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	18
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	112
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	-	98
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	109
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	76
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	39
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	48
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	86
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	61
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	37
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	79
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	54
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	59
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	65

Moisture Content Method: AN002 Tested: 30/4/2021



ME320181 R0

	\$	ample Number Sample Matrix Sample Date Sample Name	Soil 20 Apr 2021	ME320181.010 Soil 20 Apr 2021 SE218963.010	ME320181.011 Soil 20 Apr 2021 SE218963.011	ME320181.012 Soil 20 Apr 2021 SE218963.012
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 28/4/2021	(continued)					
% Moisture*	%w/w	1	-	-	-	11.8

03-May-2021 Page 7 of 21



ME320181 R0

		Sample Number Sample Matrix Sample Date Sample Name	Soil 20 Apr 2021	ME320181.014 Soil 20 Apr 2021 SE218963.014	ME320181.015 Soil 20 Apr 2021 SE218963.015	ME320181.016 Soil 21 Apr 2021 SE218963.016
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S	amples Method:	MA-1523 Te	ested: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	-	-	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	0.0019
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	-	<0.0016
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	<0.0016
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	<0.008
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	-	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	<0.008
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	102
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	94
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	163
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	120
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	118
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	90
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	106
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-	-	-	84
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	88
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	41
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	14
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	122
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	-	107
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	106
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	86
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	41
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	46
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	87
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	55
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	48
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	88
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	67
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	48
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	42

Moisture Content Method: AN002 Tested: 30/4/2021



ME320181 R0

				Sample Number Sample Matrix Sample Date Sample Name	Soil 20 Apr 2021	ME320181.014 Soil 20 Apr 2021 SE218963.014	ME320181.015 Soil 20 Apr 2021 SE218963.015	ME320181.016 Soil 21 Apr 2021 SE218963.016
Parameter			Units	LOR				
Moisture Content	Method: AN002	Tested: 28/4/2021	(continued)					
% Moisture*			%w/w	1	-	-	-	9.2

03-May-2021 Page 9 of 21



ME320181 R0

		Sample Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320181.018 Soil 21 Apr 2021 SE218963.018	ME320181.019 Soil 21 Apr 2021 SE218963.019	ME320181.020 Soil 21 Apr 2021 SE218963.020
Parameter Per- and Polyfluoroalkyl Substances (PFAS) in Solid S	Units Amples Method:	LOR MA-1523 Te	sted: 30/4/2021			
Per- and Polyfluoroalkyl Substances (PPAS) in Solid S	ampies Method:	WA-1523 Te	stea: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	-	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	<u>-</u>	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016				
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<u> </u>	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol 2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg mg/kg	0.016	<u>-</u>	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid		0.008		-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	mg/kg	0.008	-	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-		-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%			_		
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	_		_	_	_
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	_	_	_	-	_
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-		-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-		-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-		-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2 PFTeDA) Isotopically Labelled Internal Recovery	%	-	<u>-</u>	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	_		-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-

Moisture Content Method: AN002 Tested: 30/4/2021



ME320181 R0

	\$	ample Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320181.018 Soil 21 Apr 2021 SE218963.018	ME320181.019 Soil 21 Apr 2021 SE218963.019	ME320181.020 Soil 21 Apr 2021 SE218963.020
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	-	-	-	-

03-May-2021 Page 11 of 21



ME320181 R0

Parameter	Units	Sample Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320181.022 Soil 21 Apr 2021 SE218963.022	ME320181.023 Soil 21 Apr 2021 SE218963.023	ME320181.024 Soil 21 Apr 2021 SE218963.024
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S			sted: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	_	-	_	_
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	_			-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	_	-	_	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	_	_	_	_
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	-	-
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery (13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	- -	-	-
(13C3-PFHXS) isotopically Labelled Internal Recovery (13C8-PFOS) isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFOS) isotopically Labelled Internal Recovery (13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-4.2 FTS) Isotopically Labelled Internal Recovery (13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%		-	-	-	-
(13C2-6.2 FTS) Isotopically Labelled Internal Recovery (13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%		-	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%		-	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%		-	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	_	-	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	_	-	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	_	-	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
•						1

Moisture Content Method: AN002 Tested: 30/4/2021



ME320181 R0

	S	mple Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320181.022 Soil 21 Apr 2021 SE218963.022	ME320181.023 Soil 21 Apr 2021 SE218963.023	ME320181.024 Soil 21 Apr 2021 SE218963.024
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	-	-	-	-

03-May-2021 Page 13 of 21



ME320181 R0

Parameter	Units	Sample Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320181.026 Soil 21 Apr 2021 SE218963.026	ME320181.027 Soil 21 Apr 2021 SE218963.027	ME320181.028 Soil 21 Apr 2021 SE218963.028
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S			ested: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	_	-	-	_
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	_	_	_	_
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016		-	_	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016		_	_	_
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	-	-
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%		-	-		-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery (13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PPOS) isotopically Labelled Internal Recovery (13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-4.2 FTS) Isotopically Labelled Internal Recovery (13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%		-	-	-	_
(13C2-8.2 FTS) Isotopically Labelled Internal Recovery (13C2-8.2 FTS) Isotopically Labelled Internal Recovery	%		<u>-</u>	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%		-	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%		-	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	_	-	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	_	-	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	_	-	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
<u> </u>						

Moisture Content Method: AN002 Tested: 30/4/2021



ME320181 R0

	\$	imple Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320181.026 Soil 21 Apr 2021 SE218963.026	ME320181.027 Soil 21 Apr 2021 SE218963.027	ME320181.028 Soil 21 Apr 2021 SE218963.028
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	-	-	-	-

03-May-2021 Page 15 of 21



Sample Number ME320181.029
Sample Matrix Soil
Sample Date 21 Apr 2021
Sample Name SE218963.029

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Sar	mples Method: N	/A-1523	Tested: 30/4/2021
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	_
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	_
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	_
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	_
Perfluorotetradecanoic acid (PFTeDA)		0.0016	
Perfluorohexadecanoic acid (PFHxDA)	mg/kg		-
,	mg/kg	0.0032	
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-
Sum PFOS and PFHXS	mg/kg	0.0016	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	_
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	_
Perfluoroctane sulfonamide (PFOSA)			
, ,	mg/kg	0.0016	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	_	_
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	_	_
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-
		-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	_	_
· / · · ·			-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-

03-May-2021 Page 16 of 21



ME320181 R0

			S	mple Number ample Matrix Sample Date Sample Name	c Soil e 21 Apr 2021
Parameter			Units	LOR	
Moisture Content	Method: AN002	Tested: 30/4/2021			
% Moisture*			%w/w	1	-

03-May-2021 Page 17 of 21



QC SUMMARY

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

Moisture Content Method: ME-(AU)-[ENV]AN002

	Parameter	QC			
ı		Reference			
ı	% Moisture*	LB040859	%w/w	1	3 - 21%

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Perfluorobutanoic acid (PFBA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentanoic acid (PFPeA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexanoic acid (PFHxA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptanoic acid (PFHpA)	LB040858	mg/kg	0.0016	<0.0016	0%	75%
Perfluorooctanoic Acid (PFOA)	LB040858	mg/kg	0.0008	<0.0008	0%	84%
Perfluorononanoic acid (PFNA)	LB040858	mg/kg	0.0016	<0.0016	0%	103%
Perfluorodecanoic acid (PFDA)	LB040858	mg/kg	0.0016	<0.0016	0%	109%
Perfluoroundecanoic acid (PFUnA)	LB040858	mg/kg	0.0016	<0.0016	0%	101%
Perfluorododecanoic acid (PFDoA)	LB040858	mg/kg	0.0016	<0.0016	0%	110%
Perfluorotridecanoic acid (PFTrDA)	LB040858	mg/kg	0.0016	<0.0016	0%	91%
Perfluorotetradecanoic acid (PFTeDA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexadecanoic acid (PFHxDA)	LB040858	mg/kg	0.0032	<0.0032	0%	NA
Perfluorobutane sulfonate (PFBS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentane sulfonate (PFPeS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexane sulfonate (PFHxS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptane sulfonate (PFHpS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA NA
	LB040858		0.0016	<0.0016	0%	127%
Perfluorooctane sulfonate (PFOS) Sum PFOS and PFHXS		mg/kg	0.0016		0%	127% NA
	LB040858	mg/kg		<0.0016		
Perfluorononane sulfonate (PFNS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA NA
Perfluorodecane sulfonate (PFDS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorododecane sulfonate (PFDoS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroctane sulfonamide (PFOSA)	LB040858	mg/kg	0.0016	<0.0016	0%	74%
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	LB040858	mg/kg	0.008	<0.008	0%	NA
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	LB040858	mg/kg	0.008	<0.008	0%	NA
2-(N-Methylperfluorooctane sulfonamido)-ethanol (N-MeFOSE)	LB040858	mg/kg	0.016	<0.016	0%	NA
2-(N-Ethylperfluorooctane sulfonamido)-ethanol (N-EtFOSE)	LB040858	mg/kg	0.016	<0.016	0%	NA
N-Methylperfluorooctanesulfonamidoacetic acid (N_MeFOSAA)	LB040858	mg/kg	0.008	<0.008	0%	NA
N-Ethylperfluorooctanesulfonamidoacetic Acid (N-EtFOSAA)	LB040858	mg/kg	0.008	<0.008	0%	NA
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	99%	0 - 1%	99%
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	88%	1%	90%
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	136%	0 - 10%	144%
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	108%	1 - 10%	119%
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	112%	8 - 9%	118%
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	110%	2 - 3%	114%
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	109%	19%	98%
(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	87%	6 - 11%	98%
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	84%	5 - 6%	96%
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	49%	9 - 59%	76%
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	11%	26 - 76%	32%
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	123%	2 - 5%	117%
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	102%	0 - 13%	100%
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	115%	5 - 6%	108%
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	89%	1 - 4%	84%
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	47%	3 - 9%	46%
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	55%	5 - 11%	51%
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	LB040858	%	_	101%	2 - 7%	99%
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	65%	1 - 80%	69%
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	59%	10 - 95%	56%

03-May-2021 Page 18 of 21



QC SUMMARY



MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 (continued)

				MB	DUP %RPD	LCS %Recovery
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	92%	0 - 6%	98%
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	79%	11%	91%
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	65%	4 - 9%	70%
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	69%	9 - 11%	58%

03-May-2021 Page 19 of 21



METHOD SUMMARY

ME320181 R0

METHOD

METHODOLOGY SUMMARY

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

MA-1523

This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

03-May-2021 Page 20 of 21



FOOTNOTES



FOOTNOTES

IS Insufficient sample for analysis. LOR Limit of Reporting LNR Sample listed, but not received. Raised or Lowered Limit of Reporting ↑↓ NATA accreditation does not cover the OFH QC result is above the upper tolerance performance of this service QFL QC result is below the lower tolerance Indicative data, theoretical holding time exceeded. The sample was not analysed for this analyte Indicates that both * and ** apply. NVI Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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03-May-2021 Page 21 of 21







CLIENT DETAILS

LABORATORY DETAILS

Andrew Ibrahim Huong Crawford Contact Manager

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E25077 Hughes, Waratah, Wharf Melrose Pk SE218963B R0 SGS Reference Project

E25077 10/5/2021 Order Number Date Received 31 11/5/2021 Samples Date Reported

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

Bennet LO

Senior Organic Chemist/Metals Chemist

Shane MCDERMOTT

Inorganic/Metals Chemist

SGS Australia Pty Ltd ABN 44 000 964 278

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Member of the SGS Group Page 1 of 7



SE218963B R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 10/5/2021

SGS

			30-BH101_2.9-3.0	30-BH101_5.4-5.5
			SOIL	SOIL
				-
			20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963B.030	SE218963B.031
Lead, Pb	mg/kg	1	74	550
Arsenic, As	mg/kg	1	5	310

11/05/2021 Page 2 of 7



SE218963B R0

Moisture Content [AN002] Tested: 10/5/2021

			30-BH101_2.9-3.0	30-BH101_5.4-5.5
			SOIL	SOIL
			- 20/4/2021	- 20/4/2021
PARAMETER	UOM	LOR	SE218963B.030	SE218963B.031
% Moisture	%w/w	1	9.6	20.0

11/05/2021 Page 3 of 7





TCLP (Toxicity Characteristic Leaching Procedure) for Metals [AN006] Tested: 10/5/2021

			30-BH101_2.9-3.0	30-BH101_5.4-5.5
PARAMETER	UOM	LOR	SOIL - 20/4/2021 SE218963B.030	SOIL - 20/4/2021 SE218963B.031
pH 1:20	pH Units	-	7.4	7.9
pH 1:20 plus HCL	pH Units	-	2.2	2.2
Extraction Solution Used	No unit	-	1	1
Mass of Sample Used*	g	-	13	13
Volume of ExtractionSolution Used*	mL	-	250	250
pH TCLP after 18 hours	pH Units	-	5.4	5.1

11/05/2021 Page 4 of 7



SE218963B R0

Metals in TCLP Extract by ICPOES [AN320] Tested: 11/5/2021

			30-BH101_2.9-3.0	30-BH101_5.4-5.5
			SOIL	SOIL
				-
			20/4/2021	20/4/2021
PARAMETER	UOM	LOR	SE218963B.030	SE218963B.031
Arsenic, As	mg/L	0.02	<0.020	0.34
Lead, Pb	mg/L	0.02	1.1	2.9

11/05/2021 Page 5 of 7



METHOD SUMMARY

SE218963B R0

BALL	 IOI	_	

METHODOLOGY SUMMARY

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

AN006

Contaminants of interest in a waste material are leached out of the waste with a selected leaching solution under controlled conditions. The ratio of sample to extraction fluid is 100g to 2L (1 to 20 by mass). The concentration of each contaminant of interest is determined in the leachate by appropriate methods after separation from the sample by filtering. Base on USEPA 1311.

AN006

Extraction Fluid #1: This fluid is made by combining 128.6mL of dilute sodium hydroxide solution and 11.5mL glacial acetic acid with water and diluting to a volume of 2 litres. The pH of this fluid should be 4.93 ± 0.05.

AN006

Extraction Fluid #2: This fluid is made by diluting 5.7mL glacial acetic acid with water to a volume of 1 litre. The pH of this fluid should be 2.88 ± 0.05.

AN020

Unpreserved water sample is filtered through a $0.45\mu m$ membrane filter and acidified with nitric acid similar to APHA3030B.

AN040/AN320

A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.

AN040

A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

AN320

Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.

AN320

Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements . Reference APHA 3120 B.

11/05/2021 Page 6 of 7





FOOTNOTES -

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

** Indicative data, theoretical holding time exceeded.

*** Indicates that both * and ** apply.

- Not analysed.

NVL Not validated.

IS Insufficient sample for

LNR analysis.

Sample listed, but not received.

UOM Unit of Measure.

LOR Limit of Reporting.

↑↓ Raised/lowered Limit of

Reporting.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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11/05/2021 Page 7 of 7





STATEMENT OF QA/QC PERFORMANCE

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ProjectE25077 Hughes,Waratah,Wharf Melrose PkSGS ReferenceSE218963B R0Order NumberE25077Date Received10 May 2021

Samples 31 Date Reported 11 May 2021

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date Moisture Content 2 items

Duplicate Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES 2 items

SAMPLE SUMMARY —

SGS Australia Pty Ltd ABN 44 000 964 278 Environment, Health and Safety

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HOLDING TIME SUMMARY

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Metals in TCLP Extract by	/ ICPOES						Method:	ME-(AU)-[ENV]AN32
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH101_2.9-3.0	SE218963B.030	LB224367	20 Apr 2021	10 May 2021	17 Oct 2021	11 May 2021	17 Oct 2021	11 May 2021
30-BH101_5.4-5.5	SE218963B.031	LB224367	20 Apr 2021	10 May 2021	17 Oct 2021	11 May 2021	17 Oct 2021	11 May 2021
Moisture Content	loisture Content Method: ME-(AU)-[ENV]AN							
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH101_2.9-3.0	SE218963B.030	LB224356	20 Apr 2021	10 May 2021	04 May 2021	10 May 2021†	15 May 2021	11 May 2021
30-BH101_5.4-5.5	SE218963B.031	LB224356	20 Apr 2021	10 May 2021	04 May 2021	10 May 2021†	15 May 2021	11 May 2021
TCLP (Toxicity Characteris	stic Leaching Procedure) for	Metals					Method:	ME-(AU)-[ENV]AN00
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH101_2.9-3.0	SE218963B.030	LB224323	20 Apr 2021	10 May 2021	17 Oct 2021	10 May 2021	17 Oct 2021	11 May 2021
30-BH101_5.4-5.5	SE218963B.031	LB224323	20 Apr 2021	10 May 2021	17 Oct 2021	10 May 2021	17 Oct 2021	11 May 2021
Total Recoverable Elemer	nts in Soil/Waste Solids/Mate	erials by ICPOES					Method: ME-(AL)-[ENV]AN040/AN32
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH101_2.9-3.0	SE218963B.030	LB224360	20 Apr 2021	10 May 2021	17 Oct 2021	10 May 2021	17 Oct 2021	11 May 2021
30-BH101_5.4-5.5	SE218963B.031	LB224360	20 Apr 2021	10 May 2021	17 Oct 2021	10 May 2021	17 Oct 2021	11 May 2021

11/5/2021 Page 2 of 9



SURROGATES

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.

11/5/2021 Page 3 of 9





METHOD BLANKS

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Metals in TCLP Extract by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Number	Parameter	Units	LOR	Result
LB224367.001	Arsenic, As	mg/L	0.02	<0.020
	Lead, Pb	mg/L	0.02	<0.02

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB224360.001	Arsenic, As	mg/kg	1	<1
	Lead, Pb	mg/kg	1	<1

11/5/2021 Page 4 of 9



SE218963B R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218963B.031	LB224360.007	Arsenic, As	mg/kg	1	310	440	30	34 ②
		Lead, Pb	mg/kg	1	550	860	30	44 ②

11/5/2021 Page 5 of 9



LABORATORY CONTROL SAMPLES

SE218963B R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Metals in TCLP Extract by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB224367.002	Arsenic, As	mg/L	0.02	0.50	0.5	80 - 120	99
	Lead, Pb	mg/L	0.02	0.48	0.5	80 - 120	95

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB224360.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	103
	Lead, Pb	mg/kg	1	91	89.9	80 - 120	101

11/5/2021 Page 6 of 9





Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE219373.041	LB224360.004	Arsenic, As	mg/kg	1	51	8.60540738293	50	84
		Lead, Pb	mg/kg	1	64	24.40341531344	50	80

11/5/2021 Page 7 of 9



MATRIX SPIKE DUPLICATES

SE218963B R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = $100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

11/5/2021 Page 8 of 9



Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

- * NATA accreditation does not cover the performance of this service.
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ® Results less than 5 times LOR preclude acceptance criteria for RPD.
- Recovery failed acceptance criteria due to matrix interference.
- ® Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- © LOR was raised due to sample matrix interference.
- ① LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ® Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ® Recovery failed acceptance criteria due to sample heterogeneity.
- (nequired dilution).
- † Refer to relevant report comments for further information.

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11/5/2021 Page 9 of 9





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E25077 Hughes, Waratah, Wharf Melrose Pk

E25077 Order Number 36 Samples

Project

Telephone (Not specified) Facsimile andrew.ibrahim@eiaustralia.com.au Email

SE218964 R0 SGS Reference

23/4/2021 Date Received 4/5/2021 Date Reported

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report No: ME320182

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifiers Yusuf Kuthpudin and Ravee Sivasubramaniam.

SIGNATORIES

Akheeqar BENIAMEEN

Chemist

Bennet LO

Senior Organic Chemist/Metals Chemist

Dong LIANG

Metals/Inorganics Team Leader

Huong CRAWFORD

Production Manager

Ly Kim HA

Organic Section Head

Ravee SIVASUBRAMANIAM

S. Ravenolm.

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VOC's in Soil [AN433] Tested: 29/4/2021

			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
PARAMETER	UOM	LOR	21/4/2021 SE218964.001	21/4/2021 SE218964.002	21/4/2021 SE218964.003	22/4/2021 SE218964.004	22/4/2021 SE218964.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	21/4/2021 SE218964.006	21/4/2021 SE218964.007	21/4/2021 SE218964.008	21/4/2021 SE218964.009	21/4/2021 SE218964.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			112-BH107_0.2-0.3	112-BH108_0.2-0.3	112-BH108_0.7-0.8	112-BH109_0.3-0.4	112-BH109_0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218964.011	SE218964.012	SE218964.013	SE218964.014	SE218964.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			112-BH110M_0.2-0.3	112-BH111_0.2-0.3	112-BH111_0.6-0.7	112-BH112M_0.4-0.	112-BH113M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.016	SE218964.017	SE218964.018	SE218964.019	SE218964.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

4/05/2021 Page 2 of 31



VOC's in Soil [AN433] Tested: 29/4/2021 (continued)

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021
PARAMETER	UOM	LOR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5	32-BH107M_0.2-0.3	QD1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	- 22/4/2021 SE218964.026	- 22/4/2021 SE218964.027	- 22/4/2021 SE218964.028	22/4/2021 SE218964.029	- 20/2/2021 SE218964.030
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			QD2	QD3	QD4	QTB1	QTS1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	- 22/2/2021 SE218964.031	- 22/2/2021 SE218964.032	- 22/2/2021 SE218964.033	- 22/2/2021 SE218964.035	- 22/2/2021 SE218964.036
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[109%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[101%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[95%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	[95%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[95%]
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	-
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	-
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-

4/05/2021 Page 3 of 31



Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 29/4/2021

			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021	- 22/4/2021	- 22/4/2021
PARAMETER	UOM	LOR	SE218964.001	SE218964.002	SE218964.003	SE218964.004	SE218964.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.006	SE218964.007	SE218964.008	SE218964.009	SE218964.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			112-BH107_0.2-0.3	112-BH108_0.2-0.3	112-BH108_0.7-0.8	112-BH109_0.3-0.4	112-BH109_0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.011	SE218964.012	SE218964.013	SE218964.014	SE218964.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			112-BH110M_0.2-0.3	112-BH111_0.2-0.3	112-BH111_0.6-0.7	112-BH112M_0.4-0.5	112-BH113M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021
PARAMETER	UOM	LOR	SE218964.016	SE218964.017	SE218964.018	SE218964.019	SE218964.020
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5	32-BH107M_0.2-0.3	QD1
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	20/2/2021
PARAMETER	UOM	LOR	SE218964.026	SE218964.027	SE218964.028	SE218964.029	SE218964.030
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

4/05/2021 Page 4 of 31



SE218964 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 29/4/2021 (continued)

			QD2	QD3	QD4
			SOIL	SOIL	SOIL
			22/2/2021	22/2/2021	22/2/2021
PARAMETER	UOM	LOR	SE218964.031	SE218964.032	SE218964.033
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

4/05/2021 Page 5 of 31



TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 29/4/2021

			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.001	SE218964.002	SE218964.003	SE218964.004	SE218964.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	85	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	93	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	150	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	180	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	ИОМ	LOR	SE218964.006	SE218964.007	SE218964.008	SE218964.009	SE218964.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	50	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	48	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

			112-BH107_0.2-0.3	112-BH108_0.2-0.3	112-BH108_0.7-0.8	112-BH109_0.3-0.4	112-BH109_0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.011	SE218964.012	SE218964.013	SE218964.014	SE218964.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	120	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	190	<45	<45	53
TRH C37-C40	mg/kg	100	<100	210	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	210	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	300	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	310	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	510	<210	<210	<210

4/05/2021 Page 6 of 31



TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 29/4/2021 (continued)

			l			l	J
			112-BH110M_0.2-0.3	112-BH111_0.2-0.3	112-BH111_0.6-0.7	112-BH112M_0.4-0.5	112-BH113M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 22/4/2021	- 22/4/2021	22/4/2021	- 22/4/2021
PARAMETER	UOM	LOR	SE218964.016	SE218964.017	SE218964.018	SE218964.019	SE218964.020
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	52	<45
TRH C29-C36	mg/kg	45	56	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	2011	8011	8011
					SOIL	SOIL -	SOIL
			- 22/4/2021	- 22/4/2021	- 22/4/2021	22/4/2021	- 22/4/2021
DADAMETED	UOM	LOR					
PARAMETER	UOM	LUR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5	32-BH107M_0.2-0.3	QD1
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021	- 20/2/2021
PARAMETER	UOM	LOR	SE218964.026	SE218964.027	SE218964.028	SE218964.029	SE218964.030
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

4/05/2021 Page 7 of 31



SE218964 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 29/4/2021 (continued)

			QD2	QD3	QD4
			SOIL	SOIL	SOIL
			22/2/2021	22/2/2021	22/2/2021
PARAMETER	UOM	LOR	SE218964.031	SE218964.032	SE218964.033
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

4/05/2021 Page 8 of 31



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 29/4/2021

				1			
			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.001	SE218964.002	SE218964.003	SE218964.004	SE218964.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.6	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	0.6	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.3	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.4</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	0.4	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>0.5</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	0.5	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>0.4</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	0.4	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	3.2	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	3.2	<0.8	<0.8	<0.8	<0.8

		_	440 514400 0000	440 511404 0 0 0 0	440 011405 0000	440 51140011 0 0 0	440 01140011 4 4 4 1
			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	21/4/2021 SE218964.006	21/4/2021 SE218964.007	21/4/2021 SE218964.008	21/4/2021 SE218964.009	21/4/2021 SE218964.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

4/05/2021 Page 9 of 31



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 29/4/2021 (continued)

			112-BH107_0.2-0.3	112-BH108 0.2-0.3	112-BH108 0.7-0.8	112-BH109_0.3-0.4	112-BH109 0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
PARAMETER	UOM	LOR	21/4/2021 SE218964.011	21/4/2021 SE218964.012	21/4/2021 SE218964.013	21/4/2021 SE218964.014	21/4/2021 SE218964.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	1.0	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	0.3	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	1.6	<0.1	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	1.5	<0.1	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	0.5	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	0.5	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.6	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	0.5	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.3	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.4	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td>0.7</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	0.7	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td>0.8</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	0.8	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td>0.7</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	0.7	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	7.4	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	7.4	<0.8	<0.8	<0.8

			112-BH110M 0.2-0.3	112-BH111 0.2-0.3	440 BU444 0 0 0 7	440 DU440M 0 4 0 4	112-BH113M 0.2-0.3
			112-BH110M_0.2-0.3	112-BH111_0.2-0.3	112-BH111_0.6-0.7	112-BH112M_0.4-0.	112-BH113M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
PARAMETER	UOM	LOR	21/4/2021 SE218964.016	22/4/2021 SE218964.017	22/4/2021 SE218964.018	22/4/2021 SE218964.019	22/4/2021 SE218964.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

4/05/2021 Page 10 of 31



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 29/4/2021 (continued)

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021
PARAMETER	UOM	LOR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5		
			0011				
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 22/4/2021	- 22/4/2021	- 22/4/2021	22/4/2021	- 20/2/2021
PARAMETER	UOM	LOR	SE218964.026	SE218964.027	SE218964.028	SE218964.029	SE218964.030
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.5
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.5
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.3
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.3
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.3
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td>0.4</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	0.4
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td>0.5</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	0.5
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td>0.4</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	0.4
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	3.0
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	3.0

4/05/2021 Page 11 of 31





PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 29/4/2021 (continued)

			QD2	QD3	QD4
			QD2	QUS	QD4
			SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	22/2/2021 SE218964.031	22/2/2021 SE218964.032	22/2/2021 SE218964.033
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	0.2	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	-	<0.1
				0.8	
Pyrene	mg/kg	0.1	<0.1	1.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	0.5	<0.1
Chrysene	mg/kg	0.1	<0.1	0.6	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.5	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0.4	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	0.5	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.5	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.5	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td>0.7</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	0.7	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td>0.8</td><td><0.3</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	0.8	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td>0.8</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	0.8	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	5.9	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	5.9	<0.8

4/05/2021 Page 12 of 31





OC Pesticides in Soil [AN420] Tested: 29/4/2021

Hexachlorobenzene (HCB) mg Alpha BHC mg Lindane mg Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0	.1 .1 .1 .1 .1 .1 .1 .1	SOIL 22/4/2021 SE218964.005 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	SOIL - 21/4/2021 SE218964.007 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	SOIL 21/4/2021 SE218964.008 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	112-BH106M_0.2-0.3 SOIL 21/4/2021 SE218964.009 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	112-BH107_0.2-0.3 SOIL - 21/4/2021 SE218964.011 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1
Hexachlorobenzene (HCB) mg Alpha BHC mg Lindane mg Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0	1.1	22/4/2021 SE218964.005 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	21/4/2021 SE218964.007 <0.1 <0.1 <0.1 <0.1 <0.1	- 21/4/2021 SE218964.008 <0.1 <0.1 <0.1 <0.1 <0.1	21/4/2021 SE218964.009 <0.1 <0.1 <0.1	21/4/2021 SE218964.011 <0.1 <0.1 <0.1 <0.1
Hexachlorobenzene (HCB) mg Alpha BHC mg Lindane mg Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0	1.1	22/4/2021 SE218964.005 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	21/4/2021 SE218964.007 <0.1 <0.1 <0.1 <0.1 <0.1	- 21/4/2021 SE218964.008 <0.1 <0.1 <0.1 <0.1 <0.1	21/4/2021 SE218964.009 <0.1 <0.1 <0.1	21/4/2021 SE218964.011 <0.1 <0.1 <0.1 <0.1
Hexachlorobenzene (HCB) mg Alpha BHC mg Lindane mg Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0	1.1	SE218964.005 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	SE218964.007 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	<pre>SE218964.008 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1</pre>	<pre>SE218964.009 <0.1 <0.1 <0.1 <0.1 <0.1</pre>	<pre>SE218964.011 <0.1 <0.1 <0.1 <0.1 <0.1</pre>
Hexachlorobenzene (HCB) mg Alpha BHC mg Lindane mg Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0	1.1	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1 <0.1
Alpha BHC mg Lindane mg Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0	.1 .1 .1 .1 .1 .1 .1 .1	<0.1 <0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1	<0.1 <0.1 <0.1
Lindane mg Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0 g/kg 0 g/kg 0 g/kg 0 g/kg 0	.1 .1 .1 .1 .1 .1 .1	<0.1 <0.1 <0.1 <0.1	<0.1 <0.1 <0.1	<0.1 <0.1 <0.1	<0.1 <0.1	<0.1 <0.1
Heptachlor mg Aldrin mg Beta BHC mg	g/kg 0 g/kg 0 g/kg 0 g/kg 0 g/kg 0	.1	<0.1 <0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1	<0.1
Aldrin mg Beta BHC mg	g/kg 0 g/kg 0 g/kg 0	.1	<0.1 <0.1	<0.1	<0.1		
Beta BHC mg	g/kg 0. g/kg 0	.1	<0.1			<0.1	<0.1
	g/kg 0	.1		<0.1			
Delta BHC mg			-0.4	-0.1	<0.1	<0.1	<0.1
	g/kg 0		<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide mg		.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan mg	g/kg 0	.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin mg	g/kg 0	.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin mg	g/kg 0	.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan mg	g/kg 0	.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin mg	g/kg 0	.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex mg	g/kg 0.	.1	<0.1	<0.1	<0.1	<0.1	<0.1
	g/kg ′	1	<1	<1	<1	<1	<1

4/05/2021 Page 13 of 31





OC Pesticides in Soil [AN420] Tested: 29/4/2021 (continued)

PARAMETER 100								
PRAMETER UOM LOR \$21/40021 \$21/40021 \$21/40021 \$22/4001 \$22/40021 <th></th> <th></th> <th></th> <th>112-BH109_0.3-0.4</th> <th>112-BH110M_0.2-0.3</th> <th>112-BH112M_0.4-0.5</th> <th>112-BH113M_0.2-0.3</th> <th>32-BH101_0.1-0.2</th>				112-BH109_0.3-0.4	112-BH110M_0.2-0.3	112-BH112M_0.4-0.5	112-BH113M_0.2-0.3	32-BH101_0.1-0.2
PRAMETER UOM LOR \$21/40021 \$21/40021 \$21/40021 \$22/4001 \$22/40021 <td></td> <td></td> <td></td> <td>SOII</td> <td>SOII</td> <td>SOII</td> <td>SOII</td> <td>SOII</td>				SOII	SOII	SOII	SOII	SOII
PARAMETER UM OR SE21886401 SE21886409 SE21886409 SE21886409 SE21886409 CE21886409 SE21886409 CE21886409								
Heachtorobersene (HCB) mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0				21/4/2021	21/4/2021	22/4/2021	22/4/2021	22/4/2021
Alpha BHC mghg 0.1 40.1	PARAMETER	UOM	LOR	SE218964.014	SE218964.016	SE218964.019	SE218964.020	SE218964.021
Lindine mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor mg/kg 0.1 4.0.1	Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Addin mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <	Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC mg/kg 0.1 40.1	Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachior eposide mg/kg 0.1	Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
op*DDE mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <	Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan mg/kg 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 <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 <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 <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 <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 <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	Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Gamma Chlordane mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <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 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2	o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
trans-Nonachlor mg/kg 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 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 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1 < 0.1	Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p.p-DDE mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin mg/kg 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 <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 <0.2 <0.2 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin mg/kg 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 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <	p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
O,P'-DDD mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
O,P'-DDT mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <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 <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 <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 <0.2 <0.2 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Beta Endosulfan mg/kg 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 <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 <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 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.2 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p.p'-DDD mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p.p'-DDT mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endosulfan sulphate mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 </td <td>p,p'-DDD</td> <td>mg/kg</td> <td>0.1</td> <td><0.1</td> <td><0.1</td> <td><0.1</td> <td><0.1</td> <td><0.1</td>	p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex mg/kg 0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Mirex			<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg						

4/05/2021 Page 14 of 31





OC Pesticides in Soil [AN420] Tested: 29/4/2021 (continued)

			32-BH102_0.2-0.3	2-BH103_0.3-0.4	32-BH104M_0.2-0.3	32-BH105_0.2-0.3	32-BH107M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	22/4/2021 SE218964.022	22/4/2021 SE218964.023	22/4/2021 SE218964.025	22/4/2021 SE218964.026	22/4/2021 SE218964.029
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

4/05/2021 Page 15 of 31



OP Pesticides in Soil [AN420] Tested: 29/4/2021

			112-BH102_0.4-0.5	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH107_0.2-0.3
PARAMETER	UOM	LOR	SOIL - 22/4/2021 SE218964.005	SOIL - 21/4/2021 SE218964.007	SOIL - 21/4/2021 SE218964.008	SOIL - 21/4/2021 SE218964.009	SOIL - 21/4/2021 SE218964.011
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

			112-BH109_0.3-0.4	112-BH110M_0.2-0.3	112-BH112M_0.4-0.5	112-BH113M_0.2-0.3	32-BH101_0.1-0.2
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
			21/4/2021	21/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.014	SE218964.016	SE218964.019	SE218964.020	SE218964.021
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

			32-BH102_0.2-0.3	2-BH103_0.3-0.4	32-BH104M_0.2-0.3	32-BH105_0.2-0.3	32-BH107M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.022	SE218964.023	SE218964.025	SE218964.026	SE218964.029
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

4/05/2021 Page 16 of 31



PCBs in Soil [AN420] Tested: 29/4/2021

			112-BH102_0.4-0.5	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH107_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			22/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.005	SE218964.007	SE218964.008	SE218964.009	SE218964.011
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

			112-BH109_0.3-0.4	112-BH110M_0.2-0.3	112-BH112M_0.4-0.	112-BH113M_0.2-0.3	32-BH101_0.1-0.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.014	SE218964.016	SE218964.019	SE218964.020	SE218964.021
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

			32-BH102_0.2-0.3	2-BH103_0.3-0.4	32-BH104M_0.2-0.3	32-BH105_0.2-0.3	32-BH107M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.022	SE218964.023	SE218964.025	SE218964.026	SE218964.029
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

4/05/2021 Page 17 of 31



Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/4/2021

			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 21/4/2021	- 21/4/2021	- 21/4/2021	- 22/4/2021	- 22/4/2021
PARAMETER	UOM	LOR	SE218964.001	SE218964.002	SE218964.003	SE218964.004	SE218964.005
Arsenic, As	mg/kg	1	6	7	4	10	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	13	12	12	9.3
Copper, Cu	mg/kg	0.5	9.2	10	7.1	37	54
Lead, Pb	mg/kg	1	24	16	16	16	5
Nickel, Ni	mg/kg	0.5	5.5	6.8	3.6	26	68
Zinc, Zn	mg/kg	2	28	30	23	29	41

			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.006	SE218964.007	SE218964.008	SE218964.009	SE218964.010
Arsenic, As	mg/kg	1	6	2	4	7	10
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	18	12	15	11	15
Copper, Cu	mg/kg	0.5	22	66	18	26	23
Lead, Pb	mg/kg	1	20	2	43	28	57
Nickel, Ni	mg/kg	0.5	8.4	68	10	7.0	5.3
Zinc, Zn	mg/kg	2	28	40	260	37	46

			112-BH107_0.2-0.3	112-BH108_0.2-0.3	112-BH108_0.7-0.8	112-BH109_0.3-0.4	112-BH109_0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.011	SE218964.012	SE218964.013	SE218964.014	SE218964.015
Arsenic, As	mg/kg	1	5	6	5	2	9
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	7.8	15	5.9	8.8	10
Copper, Cu	mg/kg	0.5	39	39	27	3.6	23
Lead, Pb	mg/kg	1	14	25	17	5	23
Nickel, Ni	mg/kg	0.5	23	19	6.9	1.8	4.0
Zinc, Zn	mg/kg	2	33	61	68	9.8	30

			112-BH110M_0.2-0.3	112-BH111_0.2-0.3	112-BH111_0.6-0.7	112-BH112M_0.4-0.5	112-BH113M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.016	SE218964.017	SE218964.018	SE218964.019	SE218964.020
Arsenic, As	mg/kg	1	9	7	3	7	11
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	12	6.0	23	12
Copper, Cu	mg/kg	0.5	19	26	15	31	16
Lead, Pb	mg/kg	1	32	20	16	31	27
Nickel, Ni	mg/kg	0.5	6.7	4.4	3.0	38	4.8
Zinc, Zn	mg/kg	2	92	27	17	210	38

4/05/2021 Page 18 of 31



Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/4/2021 (continued)

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021	- 22/4/2021
PARAMETER	UOM	LOR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
Arsenic, As	mg/kg	1	3	8	6	11	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	6.8	13	11	18	5.4
Copper, Cu	mg/kg	0.5	6.5	23	20	23	12
Lead, Pb	mg/kg	1	54	19	18	30	14
Nickel, Ni	mg/kg	0.5	2.7	5.3	4.1	8.0	1.7
Zinc, Zn	mg/kg	2	36	16	14	39	11

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5	32-BH107M_0.2-0.3	QD1
			SOIL	SOIL	SOIL	SOIL	SOIL
				-		-	
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	20/2/2021
PARAMETER	UOM	LOR	SE218964.026	SE218964.027	SE218964.028	SE218964.029	SE218964.030
Arsenic, As	mg/kg	1	9	10	9	6	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	27	13	22	11	8.9
Copper, Cu	mg/kg	0.5	42	36	710	8.8	28
Lead, Pb	mg/kg	1	220	41	86	17	54
Nickel, Ni	mg/kg	0.5	20	6.8	16	3.9	5.2
Zinc, Zn	mg/kg	2	150	42	130	17	66

			QD2	QD3	QD4
			SOIL - 22/2/2021	SOIL - 22/2/2021	SOIL - 22/2/2021
PARAMETER	UOM	LOR	SE218964.031	SE218964.032	SE218964.033
Arsenic, As	mg/kg	1	6	5	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	2.9	9.7
Copper, Cu	mg/kg	0.5	37	7.7	53
Lead, Pb	mg/kg	1	82	31	2
Nickel, Ni	mg/kg	0.5	15	1.4	53
Zinc, Zn	mg/kg	2	84	24	34

4/05/2021 Page 19 of 31





Mercury in Soil [AN312] Tested: 30/4/2021

			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.001	SE218964.002	SE218964.003	SE218964.004	SE218964.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.006	SE218964.007	SE218964.008	SE218964.009	SE218964.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			112-BH107_0.2-0.3	112-BH108_0.2-0.3	112-BH108_0.7-0.8	112-BH109_0.3-0.4	112-BH109_0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.011	SE218964.012	SE218964.013	SE218964.014	SE218964.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

			112-BH110M_0.2-0.3	112-BH111_0.2-0.3	112-BH111_0.6-0.7	112-BH112M_0.4-0.5	112-BH113M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.016	SE218964.017	SE218964.018	SE218964.019	SE218964.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	0.13	0.09

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
Mercury	mg/kg	0.05	0.13	<0.05	<0.05	0.07	<0.05

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5	32-BH107M_0.2-0.3	QD1
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	20/2/2021
PARAMETER	UOM	LOR	SE218964.026	SE218964.027	SE218964.028	SE218964.029	SE218964.030
Mercury	mg/kg	0.05	0.18	4.7	0.38	<0.05	0.10

			QD2	QD3	QD4
			SOIL	SOIL	SOIL
			22/2/2021	22/2/2021	22/2/2021
PARAMETER	UOM	LOR	SE218964.031	SE218964.032	SE218964.033
Mercury	mg/kg	0.05	0.14	<0.05	<0.05

4/05/2021 Page 20 of 31



Moisture Content [AN002] Tested: 29/4/2021

			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.001	SE218964.002	SE218964.003	SE218964.004	SE218964.005
% Moisture	%w/w	1	13.4	11.3	9.1	4.0	11.2

			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.006	SE218964.007	SE218964.008	SE218964.009	SE218964.010
% Moisture	%w/w	1	12.6	7.9	11.3	11.3	15.6

			112-BH107_0.2-0.3	112-BH108_0.2-0.3	112-BH108_0.7-0.8	112-BH109_0.3-0.4	112-BH109_0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.011	SE218964.012	SE218964.013	SE218964.014	SE218964.015
% Moisture	%w/w	1	15.6	9.0	14.4	8.0	14.4

			112-BH110M_0.2-0.3	112-BH111_0.2-0.3	112-BH111_0.6-0.7	112-BH112M_0.4-0.5	112-BH113M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.016	SE218964.017	SE218964.018	SE218964.019	SE218964.020
% Moisture	%w/w	1	21.0	15.2	17.4	12.1	13.9

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
% Moisture	%w/w	1	10.5	16.6	10.9	39.5	11.9

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5	32-BH107M_0.2-0.3	QD1
			SOIL	SOIL	SOIL	SOIL	SOIL
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	20/2/2021
PARAMETER	UOM	LOR	SE218964.026	SE218964.027	SE218964.028	SE218964.029	SE218964.030
% Moisture	%w/w	1	35.1	20.9	21.9	11.6	13.4

			QD2	QD3	QD4	QTB1
			SOIL	SOIL	SOIL	SOIL
			22/2/2021	22/2/2021	22/2/2021	22/2/2021
PARAMETER	UOM	LOR	SE218964.031	SE218964.032	SE218964.033	SE218964.035
% Moisture	%w/w	1	15.2	11.3	3.5	<1.0

4/05/2021 Page 21 of 31



Fibre Identification in soil [AN602] Tested: 3/5/2021

			30-BH110M_2.2-2.3	30-BH111M_0.2-0.3	30-BH117_0.2-0.3	112-BH101_0.3-0.4	112-BH102_0.4-0.5
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.001	SE218964.002	SE218964.003	SE218964.004	SE218964.005
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			112-BH103_0.2-0.3	112-BH104_0.2-0.3	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH106M_1.4-1.5
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.006	SE218964.007	SE218964.008	SE218964.009	SE218964.010
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			112-BH107_0.2-0.3	112-BH108_0.2-0.3	112-BH108_0.7-0.8	112-BH109_0.3-0.4	112-BH109_0.7-0.8
			SOIL	SOIL	SOIL	SOIL	SOIL
			21/4/2021	21/4/2021	21/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218964.011	SE218964.012	SE218964.013	SE218964.014	SE218964.015
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			112-BH110M 0.2-0.3	112-BH111 0.2-0.3	112-BH111 0.6-0.7	112-BH112M 0.4-0.5	112-BH113M 0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			21/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.016	SE218964.017	SE218964.018	SE218964.019	SE218964.020
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			32-BH101_0.1-0.2	32-BH102_0.2-0.3	2-BH103_0.3-0.4	2-BH103_0.9-1.0	32-BH104M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL	SOIL
							-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.021	SE218964.022	SE218964.023	SE218964.024	SE218964.025
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			32-BH105_0.2-0.3	32-BH106_0.2-0.3	32-BH106_1.4-1.5	32-BH107M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL
						-
			22/4/2021	22/4/2021	22/4/2021	22/4/2021
PARAMETER	UOM	LOR	SE218964.026	SE218964.027	SE218964.028	SE218964.029
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01

4/05/2021 Page 22 of 31



Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples [MA-1523] Tested: 3/5/2021

SOIL				112-BH102_0.4-0.5	112-BH105_0.2-0.3	112-BH106M_0.2-0.3	112-BH109_0.3-0.4	112-BH112M_0.4-0.5
PARAMETER 10				SOIL	SOIL	SOIL	SOIL	SOII
Perfunción taxis (PFRA) mg/mg 0.0016 0.0					-		- -	- -
Perfluorophatmoic and (PFPAA) mg/kg 0.0016								
Perthuoropheanoic acid (PFPeA) mg/kg 0.0016								
Perfluorochesanoic acid (PFIbA) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.	` '							
Perfluorotocanoic acid (PFHpA) mg/kg 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0008 < 0.0006 < 0.00016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 < 0.0016 <	·							
Perfluoronancia acid (PFDA) mg/kg 0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008 <0.0008	` '							
Perfluorotoanaric acid (PFNA) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.00	Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorodecanoic acid (PFDA) mg/kg 0.016 0.016 0.0016	Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	<0.0008	<0.0008	0.0009	<0.0008
Perfluoroundecanoic acid (PFUnA) mg/kg 0.0016 0.0	Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorododecanoic acid (PFDA) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.	Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotridecanoic acid (PFTDA) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <	Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotetradecanoic acid (PFTeDA) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0012 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <	Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexadecanoic acid (PFHxAA) mg/kg 0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0032 <0.0036 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016	Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorobutane sulfonate (PFBS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0	Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016	Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Perfluoronexane sulfonate (PFHxS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <	Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	0.0049	<0.0016
Sum PFOS and PFHXS	Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoronane sulfonate (PFNS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016	Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	0.034	0.0098
Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <	Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	0.039	0.0098
Perfluorododecane sulfonate (PFDoS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0	Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
HH,1H,2H,2H-Perfluorobexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.	Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0	Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
H,1H,2H,2H-Perfluorodecane sulfonamide (8:2) (8:2 FTS) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016	1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroctane sulfonamide (PFOSA) mg/kg 0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <0.0016 <th< td=""><td>1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)</td><td>mg/kg</td><td>0.0016</td><td><0.0016</td><td><0.0016</td><td><0.0016</td><td>0.0026</td><td><0.0016</td></th<>	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	0.0026	<0.0016
N-Methylperfluoroctane sulfonamide (N-MeFOSA) mg/kg 0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008	1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
N-Ethylperfluoroctane sulfonamide (N-EtFOSA) mg/kg 0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <0.008 <	Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
2-(N-Methylperfluorooctane sulfonamido)-ethanol mg/kg 0.016 <0.016	N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008	<0.008
2-(N-Ethylperfluorooctane sulfonamido)-ethanol mg/kg 0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016 <0.016	N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008	<0.008
N-Methylperfluorooctanesulfonamidoacetic acid mg/kg 0.008 <0.008 <0.008 <0.008 <0.008 <0.008	2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016	<0.016
	2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016	<0.016
N-Ethylperfluorooctanesulfonamidoacetic Acid mg/kg 0.008 <0.008 <0.008 <0.008 <0.008 <0.008	N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008	<0.008
	N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008	<0.008

4/05/2021 Page 23 of 31



Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples [MA-1523] Tested: 3/5/2021 (continued)

			112-BH113M_0.2-0.3	32-BH101_0.1-0.2	32-BH104M_0.2-0.3	32-BH107M_0.2-0.3
			SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	22/4/2021 SE218964.020	22/4/2021 SE218964.021	22/4/2021 SE218964.025	22/4/2021 SE218964.029
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	0.0024	<0.0016	<0.0016	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0024	<0.0016	<0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008		<0.0008	<0.0008	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	0.0073	<0.0016	<0.0016	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	0.0021	<0.0016	<0.0016	<0.0016
			0.011			
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	0.0029	<0.0016	<0.0016	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	0.0029	<0.0016	<0.0016	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008

4/05/2021 Page 24 of 31





VOCs in Water [AN433] Tested: 29/4/2021

			QR1
			WATER
			- 22/2/2021
PARAMETER	UOM	LOR	SE218964.034
Benzene	μg/L	0.5	<0.5
Toluene	μg/L	0.5	<0.5
Ethylbenzene	μg/L	0.5	<0.5
m/p-xylene	μg/L	1	<1
o-xylene	μg/L	0.5	<0.5
Total Xylenes	μg/L	1.5	<1.5
Total BTEX	μg/L	3	<3
Naphthalene	μg/L	0.5	<0.5

4/05/2021 Page 25 of 31





Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 29/4/2021

			QR1
			WATER - 22/2/2021
PARAMETER	UOM	LOR	SE218964.034
TRH C6-C9	μg/L	40	<40
Benzene (F0)	μg/L	0.5	<0.5
TRH C6-C10	μg/L	50	<50
TRH C6-C10 minus BTEX (F1)	μg/L	50	<50

4/05/2021 Page 26 of 31





TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 28/4/2021

			QR1 WATER - 22/2/2021
PARAMETER	UOM	LOR	SE218964.034
TRH C10-C14	μg/L	50	<50
TRH C15-C28	μg/L	200	<200
TRH C29-C36	μg/L	200	<200
TRH C37-C40	μg/L	200	<200
TRH >C10-C16	μg/L	60	<60
TRH >C10-C16 - Naphthalene (F2)	μg/L	60	<60
TRH >C16-C34 (F3)	μg/L	500	<500
TRH >C34-C40 (F4)	μg/L	500	<500
TRH C10-C40	μg/L	320	<320

4/05/2021 Page 27 of 31





Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 28/4/2021

			QR1
			WATER
PARAMETER	UOM	LOR	- 22/2/2021 SE218964.034
Arsenic, As	μg/L	1	<1
Cadmium, Cd	μg/L	0.1	<0.1
Chromium, Cr	μg/L	1	<1
Copper, Cu	μg/L	1	<1
Lead, Pb	μg/L	1	<1
Nickel, Ni	μg/L	1	<1
Zinc, Zn	μg/L	5	<5

4/05/2021 Page 28 of 31



SE218964 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 27/4/2021

			QR1
			WATER
			22/2/2021
PARAMETER	UOM	LOR	SE218964.034
Mercury	mg/L	0.0001	<0.0001

4/05/2021 Page 29 of 31



METHOD SUMMARY



METHOD _

— METHODOLOGY SUMMARY –

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

ΔN020

Unpreserved water sample is filtered through a $0.45\mu m$ membrane filter and acidified with nitric acid similar to APHA3030B.

AN040/AN320

A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.

AN040

A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

AN311(Perth)/AN312

Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.

AN312

Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500

AN318

Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).

AN403

Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.

AN403

Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.

ΔΝ403

The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.

AN420

(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

AN420

SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

AN433

VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

AN602

Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.

AN602

Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.

4/05/2021 Page 30 of 31



SGS

METHOD SUMMARY

AN602

AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602

The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):
- (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and
- (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

MA-1523

This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

FOOTNOTES -

* NATA accreditation does not cover - Not analysed.
the performance of this service. NVL Not validated.

** Indicative data, theoretical holding IS Insufficient sample for

LNR analysis.

Sample listed, but not received.

UOM Unit of Measure.

LOR Limit of Reporting.

↑↓ Raised/lowered Limit of

Reporting.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

time exceeded.

Indicates that both * and ** apply.

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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4/05/2021 Page 31 of 31





SUITE 6.01

STATEMENT OF QA/QC **PERFORMANCE**

CLIENT DETAILS LABORATORY DETAILS .

Andrew Ibrahim **Huong Crawford** Contact Manager

EI AUSTRALIA SGS Alexandria Environmental Client Laboratory

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E25077 Hughes, Waratah, Wharf Melrose Pk SE218964 R0 Project SGS Reference F25077 23 Apr 2021 Order Number Date Received

36 04 May 2021 Samples Date Reported

COMMENTS

Address

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date Mercury (dissolved) in Water 1 item

> Mercury in Soil 4 items Moisture Content 5 items

PAH (Polynuclear Aromatic Hydrocarbons) in Soil 4 items TRH (Total Recoverable Hydrocarbons) in Soil 4 items

TRH (Total Recoverable Hydrocarbons) in Water 1 item

VOC's in Soil 6 items VOCs in Water 1 item

Volatile Petroleum Hydrocarbons in Soil 4 items Volatile Petroleum Hydrocarbons in Water 1 item

Mercury in Soil 4 items

VOC's in Soil 1 item

There are more than 15 quality objective exceedences. Please see report for details

Mercury (dissolved) in Water

SAMPLE SUMMARY

Analysis Date

Surrogate

Samples clearly labelled Yes Complete documentation received SGS Ice Bricks Sample container provider Sample cooling method Samples received in correct containers 35 Soil 1 water Yes Sample counts by matrix 26/4/2021@3:35pm Date documentation received Type of documentation received COC Samples received in good order Samples received without headspace Yes

Sample temperature upon receipt 10.0C Sufficient sample for analysis Yes Turnaround time requested Standard

SGS Australia Pty Ltd ABN 44 000 964 278

Environment, Health and Unit 16 33 Maddox St Safety PO Box 6432 Bourke Rd

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples

Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia

t +61 2 8594 0400 f +61 2 8594 0499

1 item

2 items

www.sgs.com.au



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223745	21 Apr 2021	23 Apr 2021	21 Apr 2022	03 May 2021	21 Apr 2022	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223745	22 Apr 2021	23 Apr 2021	22 Apr 2022	03 May 2021	22 Apr 2022	03 May 2021

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE218964.034	LB223386	22 Feb 2021	23 Apr 2021	22 Mar 2021	27 Apr 2021†	22 Mar 2021	27 Apr 2021†

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223707	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223707	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223707	21 Apr 2021	23 Apr 2021	19 May 2021	30 Apr 2021	19 May 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223707	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223707	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223707	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021

4/5/2021 Page 2 of 39



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil (continued) Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
32-BH104M_0.2-0.3	SE218964.025	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223708	22 Apr 2021	23 Apr 2021	20 May 2021	30 Apr 2021	20 May 2021	03 May 2021
QD1	SE218964.030	LB223708	20 Feb 2021	23 Apr 2021	20 Mar 2021	30 Apr 2021†	20 Mar 2021	03 May 2021†
QD2	SE218964.031	LB223708	22 Feb 2021	23 Apr 2021	22 Mar 2021	30 Apr 2021†	22 Mar 2021	03 May 2021†
QD3	SE218964.032	LB223708	22 Feb 2021	23 Apr 2021	22 Mar 2021	30 Apr 2021†	22 Mar 2021	03 May 2021†
QD4	SE218964.033	LB223708	22 Feb 2021	23 Apr 2021	22 Mar 2021	30 Apr 2021†	22 Mar 2021	03 May 2021†

Moisture Content Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223672	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223672	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223672	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223672	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223672	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223672	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223672	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223673	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	04 May 2021	03 May 2021
QD1	SE218964.030	LB223673	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	04 May 2021	03 May 2021
QD2	SE218964.031	LB223673	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	04 May 2021	03 May 2021
QD3	SE218964.032	LB223673	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	04 May 2021	03 May 2021
QD4	SE218964.033	LB223673	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	04 May 2021	03 May 2021
QTB1	SE218964.035	LB223673	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	04 May 2021	03 May 2021

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021

4/5/2021 Page 3 of 39



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
112-BH108_0.7-0.8	SE218964.013	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
QD1	SE218964.030	LB223668	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD2	SE218964.031	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD3	SE218964.032	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD4	SE218964.033	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
QD1	SE218964.030	LB223668	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD2	SE218964.031	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD3	SE218964.032	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD4	SE218964.033	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Sample Name Sample No. QC Ref

Method: ME-(AU)-[ENV]AN420

4/5/2021 Page 4 of 39



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name S	Sample No.	QC Ref	Sampled	Received E	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
QD1 S	SE218964.030	LB223668	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD2	SE218964.031	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD3 S	SE218964.032	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD4 S	SE218964.033	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021

4/5/2021 Page 5 of 39



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

PCBs in Soil (continued) Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
32-BH104M_0.2-0.3	SE218964.025	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
QD1	SE218964.030	LB223668	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD2	SE218964.031	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD3	SE218964.032	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD4	SE218964.033	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021

Sample Name Sample No OC Ref Sampled Received Extraction Due Extracted Analysis Due Analysis

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223702	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223702	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223702	21 Apr 2021	23 Apr 2021	18 Oct 2021	30 Apr 2021	18 Oct 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223702	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223702	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223702	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223703	22 Apr 2021	23 Apr 2021	19 Oct 2021	30 Apr 2021	19 Oct 2021	03 May 2021
QD1	SE218964.030	LB223703	20 Feb 2021	23 Apr 2021	19 Aug 2021	30 Apr 2021	19 Aug 2021	03 May 2021
QD2	SE218964.031	LB223703	22 Feb 2021	23 Apr 2021	21 Aug 2021	30 Apr 2021	21 Aug 2021	03 May 2021
QD3	SE218964.032	LB223703	22 Feb 2021	23 Apr 2021	21 Aug 2021	30 Apr 2021	21 Aug 2021	03 May 2021
QD4	SE218964.033	LB223703	22 Feb 2021	23 Apr 2021	21 Aug 2021	30 Apr 2021	21 Aug 2021	03 May 2021

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE218964.034	LB223492	22 Feb 2021	23 Apr 2021	21 Aug 2021	28 Apr 2021	21 Aug 2021	28 Apr 2021

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021

4/5/2021 Page 6 of 39



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
112-BH106M_0.2-0.3	SE218964.009	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223666	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223666	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223668	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	04 May 2021
QD1	SE218964.030	LB223668	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	08 Jun 2021	04 May 2021
QD2	SE218964.031	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	04 May 2021
QD3	SE218964.032	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	04 May 2021
QD4	SE218964.033	LB223668	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	04 May 2021

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE218964.034	LB223496	22 Feb 2021	23 Apr 2021	01 Mar 2021	28 Apr 2021†	07 Jun 2021	03 May 2021

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

								() []
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106 1.4-1.5	SE218964.028	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021

4/5/2021 Page 7 of 39



SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued) Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
32-BH107M_0.2-0.3	SE218964.029	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
QD1	SE218964.030	LB223671	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD2	SE218964.031	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD3	SE218964.032	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD4	SE218964.033	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QTB1	SE218964.035	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QTS1	SE218964.036	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021

VOCs in Water

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE218964.034	LB223620	22 Feb 2021	23 Apr 2021	01 Mar 2021	29 Apr 2021†	08 Jun 2021	30 Apr 2021

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Method: ME-(AU)-[ENV]AN433

								IL (10) [Litt] at 100
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH110M_2.2-2.3	SE218964.001	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH111M_0.2-0.3	SE218964.002	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
30-BH117_0.2-0.3	SE218964.003	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH101_0.3-0.4	SE218964.004	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH102_0.4-0.5	SE218964.005	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH103_0.2-0.3	SE218964.006	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH104_0.2-0.3	SE218964.007	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH105_0.2-0.3	SE218964.008	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_0.2-0.3	SE218964.009	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH106M_1.4-1.5	SE218964.010	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH107_0.2-0.3	SE218964.011	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.2-0.3	SE218964.012	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH108_0.7-0.8	SE218964.013	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.3-0.4	SE218964.014	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH109_0.7-0.8	SE218964.015	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH110M_0.2-0.3	SE218964.016	LB223669	21 Apr 2021	23 Apr 2021	05 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.2-0.3	SE218964.017	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH111_0.6-0.7	SE218964.018	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH112M_0.4-0.5	SE218964.019	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
112-BH113M_0.2-0.3	SE218964.020	LB223669	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH101_0.1-0.2	SE218964.021	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH102_0.2-0.3	SE218964.022	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.3-0.4	SE218964.023	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
2-BH103_0.9-1.0	SE218964.024	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH104M_0.2-0.3	SE218964.025	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH105_0.2-0.3	SE218964.026	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_0.2-0.3	SE218964.027	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH106_1.4-1.5	SE218964.028	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
32-BH107M_0.2-0.3	SE218964.029	LB223671	22 Apr 2021	23 Apr 2021	06 May 2021	29 Apr 2021	08 Jun 2021	03 May 2021
QD1	SE218964.030	LB223671	20 Feb 2021	23 Apr 2021	06 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD2	SE218964.031	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD3	SE218964.032	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QD4	SE218964.033	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QTB1	SE218964.035	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021
QTS1	SE218964.036	LB223671	22 Feb 2021	23 Apr 2021	08 Mar 2021	29 Apr 2021†	08 Jun 2021	03 May 2021

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

OP1	SE319064 034	I Paggeon	22 Eab 2021	22 Apr 2021	01 Mar 2021	20 Apr 2021+	09 Jun 2021	20 Apr 2021
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed

4/5/2021 Page 8 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	105
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	109
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	109
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	108
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	109
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	103
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	105
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	107
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	117
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	106
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	104
	2-BH103_0.3-0.4	SE218964.023	%	60 - 130%	105
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	99
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	109
	32-BH107M_0.2-0.3	SE218964.029	%	60 - 130%	102

OP Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	85
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	94
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	86
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	87
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	99
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	89
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	97
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	93
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	85
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	85
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	96
	2-BH103_0.3-0.4	SE218964.023	%	60 - 130%	103
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	95
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	100
	32-BH107M_0.2-0.3	SE218964.029	%	60 - 130%	84
114-p-terphenyl (Surrogate)	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	100
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	105
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	99
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	106
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	102
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	114
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	114
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	104
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	110
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	84
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	98
	2-BH103_0.3-0.4	SE218964.023	%	60 - 130%	98
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	103
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	94
	32-BH107M 0.2-0.3	SE218964.029	%	60 - 130%	89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

					- () (
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	30-BH110M_2.2-2.3	SE218964.001	%	70 - 130%	89
	30-BH111M_0.2-0.3	SE218964.002	%	70 - 130%	87
	30-BH117_0.2-0.3	SE218964.003	%	70 - 130%	85
	112-BH101_0.3-0.4	SE218964.004	%	70 - 130%	85
	112-BH102_0.4-0.5	SE218964.005	%	70 - 130%	85
	112-BH103_0.2-0.3	SE218964.006	%	70 - 130%	86
	_112-BH104_0.2-0.3	SE218964.007	%	70 - 130%	94
	112-BH105_0.2-0.3	SE218964.008	%	70 - 130%	86
	112-BH106M_0.2-0.3	SE218964.009	%	70 - 130%	87
	_112-BH106M_1.4-1.5	SE218964.010	%	70 - 130%	85
	112-BH107_0.2-0.3	SE218964.011	%	70 - 130%	99

4/5/2021 Page 9 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	112-BH108_0.2-0.3	SE218964.012	%	70 - 130%	87
	112-BH108_0.7-0.8	SE218964.013	%	70 - 130%	90
	112-BH109_0.3-0.4	SE218964.014	%	70 - 130%	89
	112-BH109_0.7-0.8	SE218964.015	%	70 - 130%	94
	112-BH110M_0.2-0.3	SE218964.016	%	70 - 130%	97
	112-BH111_0.2-0.3	SE218964.017	%	70 - 130%	85
	112-BH111_0.6-0.7	SE218964.018	%	70 - 130%	86
	112-BH112M_0.4-0.5	SE218964.019	%	70 - 130%	93
	112-BH113M_0.2-0.3	SE218964.020	%	70 - 130%	85
	32-BH101_0.1-0.2	SE218964.021	%	70 - 130%	85
	32-BH102_0.2-0.3	SE218964.022	%	70 - 130%	96
	2-BH103_0.3-0.4	SE218964.023	%	70 - 130%	103
	2-BH103_0.9-1.0	SE218964.024	%	70 - 130%	98
	32-BH104M_0.2-0.3	SE218964.025	%	70 - 130%	95
	32-BH105_0.2-0.3	SE218964.026	%	70 - 130%	100
	32-BH106_0.2-0.3	SE218964.027	%	70 - 130%	95
	32-BH106_1.4-1.5	SE218964.028	%	70 - 130%	89
	32-BH107M_0.2-0.3	SE218964.029	%	70 - 130%	84
	QD1	SE218964.030	% %	70 - 130%	96
	QD2	SE218964.031	%	70 - 130%	96
	QD3	SE218964.032	%	70 - 130%	92
	QD4	SE218964.033	<u>%</u>	70 - 130%	94
d14-p-terphenyl (Surrogate)	30-BH110M_2.2-2.3	SE218964.001	%	70 - 130%	93
	30-BH111M_0.2-0.3	SE218964.002	%	70 - 130%	110
	30-BH117_0.2-0.3	SE218964.003	%	70 - 130%	105
	112-BH101_0.3-0.4	SE218964.004	%	70 - 130%	100
	112-BH102_0.4-0.5	SE218964.005	%	70 - 130%	100
	112-BH103_0.2-0.3	SE218964.006	%	70 - 130%	104
	112-BH104_0.2-0.3	SE218964.007	%	70 - 130%	105
	112-BH105_0.2-0.3	SE218964.008	%	70 - 130%	99
	112-BH106M_0.2-0.3	SE218964.009	%	70 - 130%	106
	112-BH106M_1.4-1.5	SE218964.010	%	70 - 130%	100
	112-BH107_0.2-0.3	SE218964.011	%	70 - 130%	102
	112-BH108_0.2-0.3	SE218964.012	%	70 - 130%	96
	112-BH108_0.7-0.8	SE218964.013	%	70 - 130%	110
	112-BH109_0.3-0.4	SE218964.014	%	70 - 130%	114
	112-BH109_0.7-0.8	SE218964.015	%	70 - 130%	108
	112-BH110M_0.2-0.3	SE218964.016	%	70 - 130%	114
	112-BH111_0.2-0.3	SE218964.017	%	70 - 130%	104
	112-BH111_0.6-0.7	SE218964.018	%	70 - 130%	98
	112-BH112M_0.4-0.5	SE218964.019	%	70 - 130%	104
	112-BH113M_0.2-0.3	SE218964.020	%	70 - 130%	110
	32-BH101_0.1-0.2	SE218964.021	%	70 - 130%	84
	32-BH102_0.2-0.3	SE218964.022	%	70 - 130%	98
	2-BH103_0.3-0.4	SE218964.023	%	70 - 130%	98
	2-BH103_0.9-1.0	SE218964.024	%	70 - 130%	99
	32-BH104M_0.2-0.3	SE218964.025	%	70 - 130%	103
	32-BH105_0.2-0.3	SE218964.026	%	70 - 130%	94
	32-BH105_0.2-0.3	SE218964.027	% %	70 - 130%	102
	32-BH106_0.2-0.3 32-BH106_1.4-1.5	SE218964.028	%	70 - 130%	93
	32-BH106_1.4-1.5 32-BH107M_0.2-0.3	SE218964.029	%	70 - 130%	89
	QD1	SE218964.030	%	70 - 130%	96
	QD2	SE218964.031	%	70 - 130%	98
	QD3	SE218964.032	%	70 - 130%	89
15.71.1	QD4	SE218964.033	%	70 - 130%	100
d5-nitrobenzene (Surrogate)	30-BH110M_2.2-2.3	SE218964.001	%	70 - 130%	96
	30-BH111M_0.2-0.3	SE218964.002	%	70 - 130%	106
	30-BH117_0.2-0.3	SE218964.003	%	70 - 130%	104
	112-BH101_0.3-0.4	SE218964.004	%	70 - 130%	105
	112-BH102_0.4-0.5	SE218964.005	%	70 - 130%	111
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4/5/2021 Page 10 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	_112-BH104_0.2-0.3	SE218964.007	%	70 - 130%	96
	_112-BH105_0.2-0.3	SE218964.008	%	70 - 130%	102
	112-BH106M_0.2-0.3	SE218964.009	%	70 - 130%	104
	112-BH106M_1.4-1.5	SE218964.010	%	70 - 130%	97
	112-BH107_0.2-0.3	SE218964.011	%	70 - 130%	95
	112-BH108_0.2-0.3	SE218964.012	%	70 - 130%	92
	112-BH108_0.7-0.8	SE218964.013	%	70 - 130%	112
	112-BH109_0.3-0.4	SE218964.014	%	70 - 130%	101
	112-BH109_0.7-0.8	SE218964.015	%	70 - 130%	101
	112-BH110M_0.2-0.3	SE218964.016	%	70 - 130%	123
	112-BH111_0.2-0.3	SE218964.017	%	70 - 130%	102
	112-BH111_0.6-0.7	SE218964.018	%	70 - 130%	105
	112-BH112M_0.4-0.5	SE218964.019	%	70 - 130%	105
	112-BH113M_0.2-0.3	SE218964.020	%	70 - 130%	95
	32-BH101_0.1-0.2	SE218964.021	%	70 - 130%	93
	32-BH102_0.2-0.3	SE218964.022	%	70 - 130%	108
	2-BH103_0.3-0.4	SE218964.023	%	70 - 130%	110
	2-BH103_0.9-1.0	SE218964.024	%	70 - 130%	100
	32-BH104M_0.2-0.3	SE218964.025	%	70 - 130%	100
	32-BH105_0.2-0.3	SE218964.026	%	70 - 130%	96
	32-BH106_0.2-0.3	SE218964.027	%	70 - 130%	97
	32-BH106_1.4-1.5	SE218964.028	%	70 - 130%	89
	32-BH107M_0.2-0.3	SE218964.029	%	70 - 130%	90
	QD1	SE218964.030	%	70 - 130%	98
	QD2	SE218964.031	%	70 - 130%	98
	QD3	SE218964.032	%	70 - 130%	93
	QD4	SE218964.033	%	70 - 130%	98

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	105
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	109
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	109
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	108
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	109
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	103
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	105
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	107
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	117
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	106
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	104
	2-BH103_0.3-0.4	SE218964.023	%	60 - 130%	105
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	99
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	109
	32-BH107M_0.2-0.3	SE218964.029	%	60 - 130%	102

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples

Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 130%	45
	112-BH105_0.2-0.3	SE218964.008	%	0 - 130%	46
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 130%	85
	112-BH109_0.3-0.4	SE218964.014	%	0 - 130%	47
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 130%	62
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 130%	25
	32-BH101_0.1-0.2	SE218964.021	%	0 - 130%	94
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 130%	44
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 130%	70
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	77
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	75
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	74
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	72
	112-BH112M 0.4-0.5	SE218964.019	%	0 - 150%	84

4/5/2021 Page 11 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples (continued)

Method: MA-1523

and Polyndoroalkyi Substances (PPAS) ili Solid Samples (condinded)					
arameter	Sample Name	Sample Number	Units	Criteria	Recovery
3C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	82
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	76
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	78
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	73
13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	41
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	37
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	39
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	48
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	45
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	50
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	40
		SE218964.025	% %	0 - 150%	38
	32-BH104M_0.2-0.3				
000 0 0 FTO)	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	37
3C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	46
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	48
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	50
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	53
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	44
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	46
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	48
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	44
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	48
C2-PFDoA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	89
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	81
	112-BH106M 0.2-0.3	SE218964.009	%	0 - 150%	105
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	80
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	80
		SE218964.020	% %	0 - 150%	87
	112-BH113M_0.2-0.3				
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	99
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	78
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	98
3C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	19
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	18
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	46
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	16
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	19
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	9
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	42
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	14
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	26
C3-PFBS) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	111
-, -, -, -, -, -, -, -, -, -, -, -, -, -	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	113
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	105
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	95
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	124
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	113
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	109
	32-BH104M_0.2-0.3	SE218964.025	- %	0 - 150%	111
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	105
C3-PFHxS) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	97
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	103
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	96
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	95
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	90
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	96
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	95
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	105
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	101
3C4_PFOA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	% %	0 - 150%	121
1 Ony isotopically cabelled litternal Recovery Standard					
	112-BH105_0.2-0.3	SE218964.008	<u>%</u> %	0 - 150%	114 113

4/5/2021 Page 12 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

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Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples (continued)

Method: MA-1523

and Polyhuoroaikyi Substances (PPAS) in Solid Samples (continued)					
arameter	Sample Name	Sample Number	Units	Criteria	Recovery 6
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	112
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	113
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	125
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	123
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	106
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	114
13C4-PFBA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	101
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	100
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	100
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	107
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	103
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	100
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	101
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	102
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	100
13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	121
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	113
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	103
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	102
	112-BH112M 0.4-0.5	SE218964.019	%	0 - 150%	125
	112-BH113M 0.2-0.3	SE218964.020	%	0 - 150%	119
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	119
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	105
	32-BH107M_0.2-0.3	SE218964.029	% %	0 - 150%	105
3C5-PFHxA) Isotopically Labelled Internal Recovery Standard					
3C5-PFHXA) isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	153 †
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	144
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	131
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	126
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	161 †
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	144
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	145
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	129
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	133
3C5-PFPeA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	94
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	93
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	92
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	102
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	94
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	96
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	93
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	93
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	92
C6-PFDA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	110
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	91
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	99
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	94
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	77
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	93
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	84
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	95
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	87
C7-PFUdA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	82
or the daily locopious, Europious montaines courts, etailed a	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	78
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	101
		SE218964.014	% %	0 - 150%	80
	112-BH109_0.3-0.4				
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	68
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	93
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	88
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	82
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	88
13C8-PFOS) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	92

4/5/2021 Page 13 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

- and Polyfluoroalkyl Substances (PFAS) in Solid Samples (continued)					Method: MA-
rameter	Sample Name	Sample Number	Units	Criteria	Recovery
3C8-PFOS) Isotopically Labelled Internal Recovery Standard	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	99
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	98
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	123
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	103
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	121
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	110
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	109
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	97
3C8-PFOSA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	79
,,,	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	83
	112-BH106M 0.2-0.3	SE218964.009	%	0 - 150%	98
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	67
	112-BH112M 0.4-0.5	SE218964.019	%	0 - 150%	115
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	107
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	83
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	68
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	84
C9-PFNA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	111
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	106
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	101
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	111
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	108
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	120
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	103
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	96
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	112
3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	59
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	51
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	65
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	48
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	84
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	42
		SE218964.021	%	0 - 150%	69
	32-BH101_0.1-0.2		_		
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	39
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	65
3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	60
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	50
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	69
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	50
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	71
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	62
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	65
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	53
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	59
5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	44
, ,	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	40
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	57
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	36
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	60
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	28
					55
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	26
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	52
i-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	46
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	49
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	61
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	41
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	41
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	44
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	60
		SE218964.025	%	0 - 150%	47

4/5/2021 Page 14 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples (continued)

Method: MA-1523

c. Line: cylinescenty: cezoninece (c. 1715) in contract campion (continues)					
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	53
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	83
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	71
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	96
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	74
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	114
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	91
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	84
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	65
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	85
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	112-BH102_0.4-0.5	SE218964.005	%	0 - 150%	63
	112-BH105_0.2-0.3	SE218964.008	%	0 - 150%	51
	112-BH106M_0.2-0.3	SE218964.009	%	0 - 150%	82
	112-BH109_0.3-0.4	SE218964.014	%	0 - 150%	59
	112-BH112M_0.4-0.5	SE218964.019	%	0 - 150%	89
	112-BH113M_0.2-0.3	SE218964.020	%	0 - 150%	74
	32-BH101_0.1-0.2	SE218964.021	%	0 - 150%	73
	32-BH104M_0.2-0.3	SE218964.025	%	0 - 150%	48
	32-BH107M_0.2-0.3	SE218964.029	%	0 - 150%	71

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

C 8 IN SOII				Modiod. Mi	=-(AU)-[ENV]A
arameter	Sample Name	Sample Number	Units	Criteria	Recovery
romofluorobenzene (Surrogate)	30-BH110M_2.2-2.3	SE218964.001	%	60 - 130%	64
	30-BH111M_0.2-0.3	SE218964.002	%	60 - 130%	71
	30-BH117_0.2-0.3	SE218964.003	%	60 - 130%	71
	112-BH101_0.3-0.4	SE218964.004	%	60 - 130%	66
	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	67
	112-BH103_0.2-0.3	SE218964.006	%	60 - 130%	68
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	69
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	68
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	69
	112-BH106M_1.4-1.5	SE218964.010	%	60 - 130%	67
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	57 ①
	112-BH108_0.2-0.3	SE218964.012	%	60 - 130%	69
	112-BH108_0.7-0.8	SE218964.013	%	60 - 130%	64
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	66
	112-BH109_0.7-0.8	SE218964.015	%	60 - 130%	69
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	63
	112-BH111_0.2-0.3	SE218964.017	%	60 - 130%	66
	112-BH111_0.6-0.7	SE218964.018	%	60 - 130%	67
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	65
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	67
	32-BH101 0.1-0.2	SE218964.021	%	60 - 130%	106
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	107
	2-BH103 0.3-0.4	SE218964.023	%	60 - 130%	111
	2-BH103 0.9-1.0	SE218964.024	%	60 - 130%	104
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	105
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	97
	32-BH106 0.2-0.3	SE218964.027	%	60 - 130%	97
	32-BH106_1.4-1.5	SE218964.028	%	60 - 130%	102
	32-BH107M 0.2-0.3	SE218964.029	%	60 - 130%	104
	QD1	SE218964.030	%	60 - 130%	103
	QD2	SE218964.031	%	60 - 130%	97
	QD3	SE218964.032	%	60 - 130%	107
	QD4	SE218964.033	%	60 - 130%	103
	QTB1	SE218964.035	%	60 - 130%	108
	QTS1	SE218964.036	%	60 - 130%	102
,2-dichloroethane (Surrogate)	30-BH110M 2.2-2.3	SE218964.001	%	60 - 130%	79
,	30-BH111M_0.2-0.3	SE218964.002	%	60 - 130%	89
	30-BH117_0.2-0.3	SE218964.003	%	60 - 130%	90
	112-BH101 0.3-0.4	SE218964.004	%	60 - 130%	84

4/5/2021 Page 15 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	86
	112-BH103_0.2-0.3	SE218964.006	%	60 - 130%	88
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	90
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	88
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	90
	112-BH106M_1.4-1.5	SE218964.010	%	60 - 130%	90
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	75
	112-BH108_0.2-0.3	SE218964.012	%	60 - 130%	90
	112-BH108_0.7-0.8	SE218964.013	%	60 - 130%	83
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	86
	112-BH109_0.7-0.8	SE218964.015	%	60 - 130%	91
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	79
	112-BH111_0.2-0.3	SE218964.017	%	60 - 130%	86
	112-BH111_0.6-0.7	SE218964.018	%	60 - 130%	85
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	85
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	87
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	109
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	110
	2-BH103_0.3-0.4	SE218964.023	% %	60 - 130%	113
	2-BH103_0.9-1.0	SE218964.024	% %	60 - 130%	106
	2-BH103_0.9-1.0 32-BH104M_0.2-0.3	SE218964.025	% %	60 - 130%	109
			% %		
	32-BH105_0.2-0.3 32-BH106_0.2-0.3	SE218964.026 SE218964.027	% %	60 - 130%	105 99
	32-BH106_0.2-0.3 32-BH106_1.4-1.5	SE218964.027 SE218964.028	% %	60 - 130% 60 - 130%	107
			%		
	32-BH107M_0.2-0.3	SE218964.029		60 - 130%	110
	QD1	SE218964.030	%	60 - 130%	109
	QD2	SE218964.031	%	60 - 130%	102
	QD3	SE218964.032	%	60 - 130%	109
	QD4	SE218964.033	%	60 - 130%	109
	QTB1	SE218964.035	%	60 - 130%	112
40 (-) (0	QTS1	SE218964.036	%	60 - 130%	108
d8-toluene (Surrogate)	30-BH110M_2.2-2.3	SE218964.001	%	60 - 130%	83
	30-BH111M_0.2-0.3	SE218964.002	%	60 - 130%	95
	30-BH117_0.2-0.3	SE218964.003	%	60 - 130%	97
	112-BH101_0.3-0.4	SE218964.004	%	60 - 130%	90
	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	91
	112-BH103_0.2-0.3	SE218964.006	%	60 - 130%	94
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	94
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	94
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	96
	112-BH106M_1.4-1.5	SE218964.010	%	60 - 130%	95
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	78
	112-BH108_0.2-0.3	SE218964.012	%	60 - 130%	95
	112-BH108_0.7-0.8	SE218964.013	%	60 - 130%	88
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	91
	112-BH109_0.7-0.8	SE218964.015	%	60 - 130%	97
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	84
	112-BH111_0.2-0.3	SE218964.017	%	60 - 130%	92
	112-BH111_0.6-0.7	SE218964.018	%	60 - 130%	90
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	91
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	93
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	109
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	111
	2-BH103_0.3-0.4	SE218964.023	%	60 - 130%	113
	2-BH103_0.9-1.0	SE218964.024	%	60 - 130%	107
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	109
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	104
	32-BH106_0.2-0.3	SE218964.027	%	60 - 130%	99
	32-BH100_0.2-0.3				
	32-BH106_1.4-1.5	SE218964.028	%	60 - 130%	106
		SE218964.028 SE218964.029	%	60 - 130% 60 - 130%	106 108

4/5/2021 Page 16 of 39



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)				Method: Mi	E-(AU)-[ENV]AN433
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	QD2	SE218964.031	%	60 - 130%	103
	QD3	SE218964.032	%	60 - 130%	110
	QD4	SE218964.033	%	60 - 130%	108
	QTB1	SE218964.035	%	60 - 130%	114
	QTS1	SE218964.036	%	60 - 130%	107

VOCs in Water Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR1	SE218964.034	%	40 - 130%	103
d4-1,2-dichloroethane (Surrogate)	QR1	SE218964.034	%	40 - 130%	108
d8-toluene (Surrogate)	QR1	SE218964.034	%	40 - 130%	100

Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433

	/olatile Petroleum Hydrocarbons in Soil				Method: MF	E-(AU)-[ENV]AN4
30 0H11 M	Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
398-H117_02-0.3 SEZ1998-0.09 N	Bromofluorobenzene (Surrogate)	30-BH110M_2.2-2.3	SE218964.001	%	60 - 130%	64
112-BH101_0_3-0.4 SEZ18964.001 %		30-BH111M_0.2-0.3	SE218964.002	%	60 - 130%	71
112-8H102_04-05 SEZ18964.005 %		30-BH117_0.2-0.3	SE218964.003	%	60 - 130%	71
1128HH03_0_20_3 \$2218964.000		112-BH101_0.3-0.4	SE218964.004	%	60 - 130%	66
1128HH03_0_20_3 \$2218964.000		112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	67
11.28 11.2			SE218964.006		60 - 130%	68
11.28H1105_0.2.0.3 SE218064.008 % 0.130% 08 12.8H1108_0.2.0.3 SE218064.010 % 0.130% 07 12.8H1108_0.2.0.3 SE218064.010 % 0.130% 07 12.8H1108_0.2.0.3 SE218064.011 % 0.130% 07 12.8H1108_0.2.0.3 SE218064.012 % 0.130% 08 12.8H1108_0.2.0.3 SE218064.013 % 0.130% 08 12.8H1108_0.2.0.3 SE218064.013 % 0.130% 08 12.8H1108_0.2.0.3 SE218064.015 % 0.130% 08 12.8H1108_0.2.0.3 SE218064.015 % 0.130% 08 12.8H1108_0.2.0.3 SE218064.017 % 0.130% 07 12.8H1128_0.2.0.3 SE218064.017 % 0.130% 07 12.8H1108_0.2.0.3 SE218064.017 % 0.130% 07 12.8H1108_0.2.0.3 SE218064.019 % 0.130% 07 12.8H1108_0.2.0.3 SE218064.020 % 0.130% 100 12.8H1108_0.2.0.3 SE218064.022 % 0.130% 100 12.8H1108_0.2.0.3 SE218064.022 % 0.130% 100 2.8H1108_0.2.0.3 SE218064.022 % 0.130% 100 2.8H1108_0.2.0.3 SE218064.020 % 0.130% 0.0 2.8H		112-BH104 0.2-0.3	SE218964.007			69
112-BH1080, 0,2-0.3 SE218964.009 % 60-130% 67 112-BH107, 0,2-0.3 SE218964.011 % 60-130% 67 112-BH107, 0,2-0.3 SE218964.011 % 60-130% 67 112-BH108, 0,2-0.3 SE218964.012 % 60-130% 69 112-BH108, 0,2-0.3 SE218964.013 % 60-130% 69 112-BH108, 0,3-0.4 SE218964.014 % 60-130% 60 112-BH108, 0,7-0.8 SE218964.015 % 60-130% 60 112-BH1108, 0,2-0.3 SE218964.015 % 60-130% 60 112-BH1108, 0,2-0.3 SE218964.016 % 60-130% 60 112-BH1108, 0,2-0.3 SE218964.017 % 60-130% 60 112-BH1108, 0,2-0.3 SE218964.017 % 60-130% 60 112-BH1108, 0,2-0.3 SE218964.018 % 60-130% 67 112-BH1108, 0,2-0.3 SE218964.019 % 60-130% 67 112-BH1108, 0,2-0.3 SE218964.019 % 60-130% 67 112-BH1108, 0,2-0.3 SE218964.020 % 60-130% 67 112-BH1108, 0,2-0.3 SE218964.020 % 60-130% 160 112-BH1108, 0,2-0.3 SE218964.020 % 60-130% 160 112-BH108, 0,2-0.3 SE218964.020 % 60-130% 160 112-BH108, 0,2-0.3 SE218964.020 % 60-130% 160 112-BH108, 0,2-0.3 SE218964.020 % 60-130% 160 102-BH108, 0,2-0.3 SE218964.020 % 60-130% 100 102-BH108, 0,2-0.3 SE218964.020 % 60-130% 100 103-BH108, 0,2-0.3 SE218964.020 % 60-130% 100 104-BE218964.020 % 60-130% 100 105-BE218964.020 % 60-130% 100 104-BE218964.020 % 60-130% 100 105-BE218964.020 % 60-130% 100 106-BE218964.020 % 60-130% 100 107-BE218964.020 % 60-130% 100 108-BE218964.020 % 60-130% 100 109-BE218964.020 % 60-130% 100 1002 SE218964.020 % 60-130% 100 102-BE218964.020 % 60-130% 100 102-BE218964.020 % 60-130% 100 103-BE118964.020 % 60-130% 10						
1128H1090L, 14-15 SEZ18984-010 % 60 - 130% 67 1128H109_0_2_0_3 SEZ18984-011 % 60 - 130% 69 1128H109_0_2_0_3 SEZ18984-012 % 60 - 130% 69 1128H109_0_3_0_4 SEZ18984-014 % 60 - 130% 66 1128H109_0_7_0_8 SEZ18984-015 % 60 - 130% 69 1128H109_0_7_0_8 SEZ18984-015 % 60 - 130% 69 1128H11_0_0_2_0_3 SEZ18984-015 % 60 - 130% 69 1128H11_0_0_0_0_3 SEZ18984-016 % 60 - 130% 69 1128H11_0_0_0_0_3 SEZ18984-016 % 60 - 130% 69 1128H11_0_0_0_0_3 SEZ18984-017 % 60 - 130% 69 1128H11_0_0_0_0_3 SEZ18984-017 % 60 - 130% 67 1128H111_0_0_0_0_3 SEZ18984-019 % 60 - 130% 67 1128H111_0_0_0_0_3 SEZ18984-021 % 60 - 130% 67 1128H111_0_0_0_0_3 SEZ18984-021 % 60 - 130% 100 328H10_0_0_0_3 SEZ18984-021 % 60 - 130% 100 328H10_0_0_0_3 SEZ18984-023 % 60 - 130% 100 328H10_0_0_0_3 SEZ18984-025 % 60 - 130% 100 328H10_0_0_0_3 SEZ18984-025 % 60 - 130% 100 328H10_0_0_0_3 SEZ18984-026 % 60 - 130% 60 328H10_0_0_0_3 SEZ18984-027 % 60 - 130% 60 328H10_0_0_0_3 SEZ18984-026 % 60 - 130% 60 328H10_						
1128H107_0_2-0.3 SE218984_013 % 60 - 130% 69 1128H108_0_2-0.3 SE218984_013 % 60 - 130% 69 1128H108_0_2-0.8 SE218984_013 % 60 - 130% 69 1128H108_0_2-0.8 SE218984_015 % 60 - 130% 60 1128H108_0_2-0.8 SE218984_015 % 60 - 130% 60 1128H108_0_2-0.8 SE218984_015 % 60 - 130% 60 1128H11_0_0_2-0.3 SE218984_016 % 60 - 130% 60 1128H11_0_0_2-0.3 SE218984_017 % 60 - 130% 60 1128H11_0_0_2-0.3 SE218984_019 % 60 - 130% 60 1128H11_0_0_2-0.3 SE218984_019 % 60 - 130% 67 128H11_0_0_2-0.3 SE218984_019 % 60 - 130% 67 128H11_0_0_2-0.3 SE218984_020 % 60 - 130% 108 128H108_0_2-0.3 SE218984_020 % 60 - 130% 108 28H108_0_2-0.3 SE218984_020 % 60 - 130% 107 328H108_0_2-0.3 SE218984_020 % 60 - 130% 60						
112-BH108_0_2_0_3 112-BH108_0_2_0_8 112-BH108_0_1_0_8 112-BH108_0_1_0_8 112-BH108_0_1_0_8 112-BH108_0_1_0_8 112-BH108_0_1_0_8 112-BH108_0_1_0_8 112-BH108_0_1_0_8 112-BH110_0_0_1_0_8 112-BH110_0_0_1_0 112-BH110_0_0_1_0 112-BH110_0_0_1_0 112-BH110_0_0_1_0_1 112-BH110_0_0_1_0 112-BH110_0_0_1 112-BH110_0_0_1_0 112-BH110_0_0_0_1 112-BH110_						
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112-BH106M_0.2-0.3 SE218964.009 % 60 - 130% 90 112-BH106M_1.4-1.5 SE218964.010 % 60 - 130% 90 112-BH107_0.2-0.3 SE218964.011 % 60 - 130% 75 112-BH108_0.2-0.3 SE218964.012 % 60 - 130% 90 112-BH108_0.7-0.8 SE218964.013 % 60 - 130% 83 112-BH109_0.3-0.4 SE218964.014 % 60 - 130% 86		112-BH104_0.2-0.3	SE218964.007		60 - 130%	90
112-BH106M_1.4-1.5 SE218964.010 % 60 - 130% 90 112-BH107_0.2-0.3 SE218964.011 % 60 - 130% 75 112-BH108_0.2-0.3 SE218964.012 % 60 - 130% 90 112-BH108_0.7-0.8 SE218964.013 % 60 - 130% 83 112-BH109_0.3-0.4 SE218964.014 % 60 - 130% 86		112-BH105_0.2-0.3	SE218964.008		60 - 130%	88
112-BH107_0.2-0.3 SE218964.011 % 60 - 130% 75 112-BH108_0.2-0.3 SE218964.012 % 60 - 130% 90 112-BH108_0.7-0.8 SE218964.013 % 60 - 130% 83 112-BH109_0.3-0.4 SE218964.014 % 60 - 130% 86		112-BH106M_0.2-0.3				
112-BH108_0.2-0.3 SE218964.012 % 60 - 130% 90 112-BH108_0.7-0.8 SE218964.013 % 60 - 130% 83 112-BH109_0.3-0.4 SE218964.014 % 60 - 130% 86		112-BH106M_1.4-1.5	SE218964.010		60 - 130%	90
112-BH108_0.7-0.8 SE218964.013 % 60 - 130% 83 112-BH109_0.3-0.4 SE218964.014 % 60 - 130% 86		112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	75
112-BH109_0.3-0.4 SE218964.014 % 60 - 130% 86		112-BH108_0.2-0.3	SE218964.012	%	60 - 130%	90
		112-BH108_0.7-0.8	SE218964.013	%	60 - 130%	83
112-BH109_0.7-0.8 SE218964.015 % 60 - 130% 91		112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	86
		112-BH109_0.7-0.8	SE218964.015	%	60 - 130%	91

4/5/2021 Page 17 of 39





Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-[ENV]AN433

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Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	79
	112-BH111_0.2-0.3	SE218964.017	%	60 - 130%	86
	112-BH111_0.6-0.7	SE218964.018	%	60 - 130%	85
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	85
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	87
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	109
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	110
	2-BH103_0.3-0.4	SE218964.023	%	60 - 130%	113
	2-BH103_0.9-1.0	SE218964.024	%	60 - 130%	106
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	109
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	105
	32-BH106_0.2-0.3	SE218964.027	%	60 - 130%	99
	32-BH106_1.4-1.5	SE218964.028	%	60 - 130%	107
	32-BH107M_0.2-0.3	SE218964.029	%	60 - 130%	110
	QD1	SE218964.030	%	60 - 130%	109
	QD2	SE218964.031	%	60 - 130%	102
	QD3	SE218964.032	%	60 - 130%	109
	QD4	SE218964.033	%	60 - 130%	109
d8-toluene (Surrogate)	30-BH110M_2.2-2.3	SE218964.001	%	60 - 130%	83
	30-BH111M_0.2-0.3	SE218964.002	%	60 - 130%	95
	30-BH117_0.2-0.3	SE218964.003	%	60 - 130%	97
	112-BH101_0.3-0.4	SE218964.004	%	60 - 130%	90
	112-BH102_0.4-0.5	SE218964.005	%	60 - 130%	91
	112-BH103_0.2-0.3	SE218964.006	%	60 - 130%	94
	112-BH104_0.2-0.3	SE218964.007	%	60 - 130%	94
	112-BH105_0.2-0.3	SE218964.008	%	60 - 130%	94
	112-BH106M_0.2-0.3	SE218964.009	%	60 - 130%	96
	112-BH106M_1.4-1.5	SE218964.010	%	60 - 130%	95
	112-BH107_0.2-0.3	SE218964.011	%	60 - 130%	78
	112-BH108_0.2-0.3	SE218964.012	%	60 - 130%	95
	112-BH108_0.7-0.8	SE218964.013	%	60 - 130%	88
	112-BH109_0.3-0.4	SE218964.014	%	60 - 130%	91
	112-BH109_0.7-0.8	SE218964.015	%	60 - 130%	97
	112-BH110M_0.2-0.3	SE218964.016	%	60 - 130%	84
	112-BH111_0.2-0.3	SE218964.017	%	60 - 130%	92
	112-BH111_0.6-0.7	SE218964.018	%	60 - 130%	90
	112-BH112M_0.4-0.5	SE218964.019	%	60 - 130%	91
	112-BH113M_0.2-0.3	SE218964.020	%	60 - 130%	93
	32-BH101_0.1-0.2	SE218964.021	%	60 - 130%	109
	32-BH102_0.2-0.3	SE218964.022	%	60 - 130%	111
	2-BH103_0.3-0.4	SE218964.023	%	60 - 130%	113
	2-BH103_0.9-1.0	SE218964.024	%	60 - 130%	107
	32-BH104M_0.2-0.3	SE218964.025	%	60 - 130%	109
	32-BH105_0.2-0.3	SE218964.026	%	60 - 130%	104
	32-BH106_0.2-0.3	SE218964.027	%	60 - 130%	99
	32-BH106_1.4-1.5	SE218964.028	%	60 - 130%	106
	32-BH107M_0.2-0.3	SE218964.029	%	60 - 130%	108
	QD1	SE218964.030	% %	60 - 130%	109
	QD2	SE218964.031	% %	60 - 130%	103
	QD3	SE218964.032	% %	60 - 130%	110
	QD4	SE218964.033	%	60 - 130%	108

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR1	SE218964.034	%	40 - 130%	103
d4-1,2-dichloroethane (Surrogate)	QR1	SE218964.034	%	60 - 130%	108
d8-toluene (Surrogate)	QR1	SE218964.034	%	40 - 130%	100

4/5/2021 Page 18 of 39



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Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB223386.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB223707.001	Mercury	mg/kg	0.05	<0.05
LB223708.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Annual a Number		D	11-24-	LOD	Danult
Sample Number		Parameter	Units	LOR	Result
B223666.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1	
	Heptachlor	mg/kg	0.1	<0.1	
		Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1	
	Delta BHC	mg/kg	0.1	<0.1	
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1	
	p,p'-DDT	mg/kg	0.1	<0.1	
		Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1	
	Methoxychlor	mg/kg	0.1	<0.1	
	Endrin Ketone	mg/kg	0.1	<0.1	
	Isodrin		0.1	<0.1	
			mg/kg		
_		Mirex	mg/kg	0.1	<0.1
	urrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%		103
223668.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1	
	p,p'-DDT	mg/kg	0.1	<0.1	
	Endosulfan sulphate	mg/kg	0.1	<0.1	
		Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor		0.1	<0.1	
		mg/kg		<0.1	
	Endrin Ketone	mg/kg	0.1		
		Isodrin	mg/kg	0.1	<0.1
-		Mirex	mg/kg	0.1	<0.1
S	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	101

4/5/2021 Page 19 of 39



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OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB223666.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Surrogates	2-fluorobiphenyl (Surrogate)	%	-	99
	d14-p-terphenyl (Surrogate)	%	-	115
LB223668.001	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Surrogates	2-fluorobiphenyl (Surrogate)	%	-	102
	d14-p-terphenyl (Surrogate)	%	-	98

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB223666.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Total PAH (18)	mg/kg	0.8	<0.8
Surrogates	d5-nitrobenzene (Surrogate)	%	-	115
	2-fluorobiphenyl (Surrogate)	%	-	99
	d14-p-terphenyl (Surrogate)	%	=	115
LB223668.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1

4/5/2021 Page 20 of 39



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Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB223668.001	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Total PAH (18)	mg/kg	0.8	<0.8
Surrogates	d5-nitrobenzene (Surrogate)	%	-	108
	2-fluorobiphenyl (Surrogate)	%	-	102
	d14-p-terphenyl (Surrogate)	%	-	98

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB223666.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%		103
LB223668.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	101

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB223702.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB223703.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB223492.001	Arsenic, As	μg/L	1	<1
	Cadmium, Cd	μg/L	0.1	<0.1
	Chromium, Cr	μg/L	1	<1
	Copper, Cu	μg/L	1	<1
	Lead, Pb	μg/L	1	<1
	Nickel, Ni	μg/L	1	<1
	Zinc, Zn	μg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number Parameter Units LOR

4/5/2021 Page 21 of 39



Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB223666.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110
LB223668.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB223496.001	TRH C10-C14	μg/L	50	<50
	TRH C15-C28	μg/L	200	<200
	TRH C29-C36	μg/L	200	<200
	TRH C37-C40	μg/L	200	<200

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB223669.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92
		d8-toluene (Surrogate)	%	-	97
		Bromofluorobenzene (Surrogate)	%	-	72
	Totals	Total BTEX	mg/kg	0.6	<0.6
LB223671.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	115
		d8-toluene (Surrogate)	%	-	116
		Bromofluorobenzene (Surrogate)	%	-	112
	Totals	Total BTEX	mg/kg	0.6	<0.6

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB223620.001	Monocyclic Aromatic	Benzene	μg/L	0.5	<0.5
	Hydrocarbons	Toluene	μg/L	0.5	<0.5
		Ethylbenzene	μg/L	0.5	<0.5
		m/p-xylene	μg/L	1	<1
		o-xylene	μg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene	μg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	96
		d8-toluene (Surrogate)	%	<u>-</u>	93
		Bromofluorobenzene (Surrogate)	%	=	99

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB223669.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92
LB223671.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	115

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number Parameter Units LOR

4/5/2021 Page 22 of 39



SE218964 R0



Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Volatile Petroleum Hydrocarbons in Water (continued)

Method: ME-(AU)-[ENV]AN433

-	•	•			
Sample Number		Parameter	Units	LOR	Result
LB223620.001		TRH C6-C9	μg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	96
		d8-toluene (Surrogate)	%	-	93
		Bromofluorobenzene (Surrogate)	%	-	99

4/5/2021 Page 23 of 39



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218956.003	LB223386.014	Mercury	μg/L	0.0001	<0.0001	<0.0001	200	0
SE218964.034	LB223386.018	Mercury	μg/L	0.0001	<0.0001	<0.0001	200	102

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.010	LB223707.014	Mercury	mg/kg	0.05	<0.05	<0.05	190	0
SE218964.019	LB223707.024	Mercury	mg/kg	0.05	0.13	0.08	77	46
SE218964.024	LB223708.014	Mercury	mg/kg	0.05	0.07	0.09	93	14
SE218964.027	LB223708.018	Mercury	mg/kg	0.05	4.7	5.0	31	5
SE218964.033	LB223708.025	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.010	LB223672.011	% Moisture	%w/w	1	15.6	15.8	36	1
SE218964.020	LB223672.022	% Moisture	%w/w	1	13.9	14.0	37	1
SE218964.030	LB223673.011	% Moisture	%w/w	1	13.4	14.7	37	9
SE218972.004	LB223673.020	% Moisture	%w/w	1	13.5	12.4	38	9

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
	Lindane	mg/kg	0.1	<0.1	<0.1	200	0
	Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
	Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
	Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
	Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
	Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
	o,p'-DDE	mg/kg	0.1	<0.1	<0.1	171	0
	Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	171	0
	Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
	Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
	trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
	p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
	Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
	Endrin	mg/kg	0.2	<0.2	<0.2	200	0
	o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
	o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
	Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
	p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
	p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
	Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
	Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
	Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
	Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
	Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
	Mirex	mg/kg	0.1	<0.1	<0.1	200	0
	Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg		0.16	0.18	30	12
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
	Lindane	mg/kg	0.1	<0.1	<0.1	200	0
	Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
	Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
	Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
	Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
							0
							0
	· ·						0
	_ ·						0
							0
		Heptachlor epoxide o,p'-DDE Alpha Endosulfan Gamma Chlordane Alpha Chlordane	Heptachlor epoxide mg/kg o.p'-DDE mg/kg Alpha Endosulfan mg/kg Gamma Chlordane mg/kg	Heptachlor epoxide mg/kg 0.1 o,p'-DDE mg/kg 0.1 Alpha Endosulfan mg/kg 0.2 Gamma Chlordane mg/kg 0.1	Heptachlor epoxide mg/kg 0.1 <0.1 o.p'-DDE mg/kg 0.1 <0.1	Heptachlor epoxide mg/kg 0.1 <0.1 <0.1 o,p'-DDE mg/kg 0.1 <0.1	Heptachlor epoxide mg/kg 0.1 <0.1 <0.1 200 o.p'-DDE mg/kg 0.1 <0.1

4/5/2021 Page 24 of 39



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

	Duplicate	Parameter	Units	1.00				
SE218972.001			Units	LOR	Original	Duplicate	Criteria %	RPD %
	LB223668.024	trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	174	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	166	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	185	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.17	30	1

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.020	LB223666.025		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	12
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	3
SE218972.001	LB223668.026		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.009	LB223666.027	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0

4/5/2021 Page 25 of 39



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.009	LB223666.027		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
					0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg					
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>200</td><td>0</td></lor=0<>	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td><0.3</td><td><0.3</td><td>134</td><td>0</td></lor=lor<>	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>175</td><td>0</td></lor=lor>	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	11
			d14-p-terphenyl (Surrogate)	mg/kg	_	0.5	0.5	30	6
SE218964.020	LB223666.025		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
					0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg					
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
									0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>200</td><td>0</td></lor=0<>	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td><0.3</td><td><0.3</td><td>134</td><td>0</td></lor=lor<>	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>175</td><td>0</td></lor=lor>	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	10
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	12
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	3
SE218964.030	LB223668.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	0.1	163	4
						<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1				
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.2	0.6	56	92 @
			Anthracene	mg/kg	0.1	<0.1	0.2	120	47
			Fluoranthene	mg/kg	0.1	0.5	1.1	43	78 @
			Pyrene	mg/kg	0.1	0.5	1.2	42	76 @
			Benzo(a)anthracene	mg/kg	0.1	0.2	0.5	57	71 🤅
			Chrysene	mg/kg	0.1	0.3	0.6	54	63 (
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	0.6	53	58 (
			Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.3	66	47
			Benzo(a)pyrene	mg/kg	0.1	0.3	0.5	56	59 (
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.3	0.4	64	45
				·					
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.4	64	61
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td>0.4</td><td>0.7</td><td>48</td><td>58 (</td></lor=0<>	mg/kg	0.2	0.4	0.7	48	58 (
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td>0.5</td><td>0.8</td><td>58</td><td>49</td></lor=lor<>	mg/kg	0.3	0.5	0.8	58	49
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td>0.4</td><td>0.7</td><td>45</td><td>53 @</td></lor=lor>	mg/kg	0.2	0.4	0.7	45	53 @

4/5/2021 Page 26 of 39



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.030	LB223668.014	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	2
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
SE218972.001	LB223668.026		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.2	<0.1	99	74
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.4	0.3	60	49
			Pyrene	mg/kg	0.1	0.5	0.3	55	49
			Benzo(a)anthracene	mg/kg	0.1	0.2	0.1	93	44
			Chrysene	mg/kg	0.1	0.3	0.2	75	47
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	0.2	69	30
			Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.1	96	60
			Benzo(a)pyrene	mg/kg	0.1	0.2	0.2	78	37
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.2	81	43
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.1	85	41
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>mg/kg</td><td>0.2</td><td>0.3</td><td>0.2</td><td>80</td><td>38</td></lor=0<>	mg/kg	0.2	0.3	0.2	80	38
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>mg/kg</td><td>0.3</td><td>0.4</td><td>0.3</td><td>88</td><td>28</td></lor=lor<>	mg/kg	0.3	0.4	0.3	88	28
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>mg/kg</td><td>0.2</td><td>0.4</td><td>0.3</td><td>70</td><td>33</td></lor=lor>	mg/kg	0.2	0.4	0.3	70	33
			Total PAH (18)	mg/kg	0.8	2.8	1.6	66	52
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	_	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	_	0.5	0.5	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.009	LB223666.028		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	_	0	0	30	12
SE218972.001	LB223668.024		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	2 200 2 200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	_	0	0	30	1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

		•						
Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.010	LB223702.014	Arsenic, As	mg/kg	1	10	8	41	20
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	15	13	34	14
		Copper, Cu	mg/kg	0.5	23	17	33	27
		Nickel, Ni	mg/kg	0.5	5.3	5.5	39	4
		Lead, Pb	mg/kg	1	57	44	32	26

4/5/2021 Page 27 of 39



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.010	LB223702.014	Zinc, Zn	mg/kg	2	46	47	34	2
SE218964.019	LB223702.024	Arsenic, As	mg/kg	1	7	7	44	10
		Cadmium, Cd	mg/kg	0.3	0.3	<0.3	152	2
		Chromium, Cr	mg/kg	0.5	23	16	33	37 ②
		Copper, Cu	mg/kg	0.5	31	25	32	20
		Nickel, Ni	mg/kg	0.5	38	10	32	115 ②
		Lead, Pb	mg/kg	1	31	31	33	1
		Zinc, Zn	mg/kg	2	210	160	31	28
SE218964.024	LB223703.014	Arsenic, As	mg/kg	1	11	12	38	8
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	18	19	33	5
		Copper, Cu	mg/kg	0.5	23	23	32	2
		Nickel, Ni	mg/kg	0.5	8.0	9.9	36	21
		Lead, Pb	mg/kg	1	30	36	33	21
		Zinc, Zn	mg/kg	2	39	41	35	5
SE218964.033	LB223703.024	Arsenic, As	mg/kg	1	2	2	78	21
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	9.7	8.0	36	19
		Copper, Cu	mg/kg	0.5	53	46	31	13
		Nickel, Ni	mg/kg	0.5	53	52	31	1
		Lead, Pb	mg/kg	1	2	2	80	13
		Zinc, Zn	mg/kg	2	34	35	36	1

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.009	LB223666.027		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE218964.020	LB223666.025		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE218964.030	LB223668.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE218972.001	LB223668.024		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0

4/5/2021 Page 28 of 39



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218972.001	LB223668.024	TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE218972.004	LB223668.022		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.010	LB223669.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg		9.0	8.2	50	9
		ŭ	d8-toluene (Surrogate)	mg/kg	-	9.5	8.7	50	9
			Bromofluorobenzene (Surrogate)	mg/kg	_	6.7	6.2	50	8
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE218964.020	LB223669.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg		8.7	8.5	50	2
			d8-toluene (Surrogate)	mg/kg	_	9.3	9.0	50	4
			Bromofluorobenzene (Surrogate)	mg/kg	_	6.7	6.4	50	4
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE218964.030	LB223671.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.9	10.5	50	4
		-	d8-toluene (Surrogate)	mg/kg	-	10.9	10.3	50	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	10.1	50	2
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE218972.004	LB223671.024	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.0	10.8	50	2
		· ·	d8-toluene (Surrogate)	mg/kg	-	10.9	10.7	50	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	10.3	50	0
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0

4/5/2021 Page 29 of 39



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOCs in Water Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.034	LB223620.025	Monocyclic	Benzene	μg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	μg/L	0.5	<0.5	<0.5	200	0
			Ethylbenzene	μg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	μg/L	1	<1	<1	200	0
			o-xylene	μg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene	μg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	10.8	10.1	30	7
			d8-toluene (Surrogate)	μg/L	-	10.0	9.9	30	0
			Bromofluorobenzene (Surrogate)	μg/L	-	10.3	9.7	30	5
SE219026.002	LB223620.024	Monocyclic	Benzene	μg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	μg/L	0.5	<0.5	<0.5	200	0
			Ethylbenzene	μg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	μg/L	1	<1	<1	200	0
			o-xylene	μg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene	μg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	11.1	10.2	30	8
			d8-toluene (Surrogate)	μg/L	-	10.0	9.9	30	1
			Bromofluorobenzene (Surrogate)	μg/L	-	10.4	9.8	30	6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.010	LB223669.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	8.2	30	9
			d8-toluene (Surrogate)	mg/kg	-	9.5	8.7	30	9
			Bromofluorobenzene (Surrogate)	mg/kg	_	6.7	6.2	30	8
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE218964.020	LB223669.025		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	8.5	30	2
			d8-toluene (Surrogate)	mg/kg	-	9.3	9.0	30	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.7	6.4	30	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE218964.030	LB223671.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.9	10.5	30	4
			d8-toluene (Surrogate)	mg/kg	-	10.9	10.3	30	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	10.1	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE218972.004	LB223671.024		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.0	10.8	30	2
			d8-toluene (Surrogate)	mg/kg	-	10.9	10.7	30	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	10.3	30	0
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE218964.034	LB223620.025		TRH C6-C10	μg/L	50	<50	<50	200	0
			TRH C6-C9	μg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	10.8	10.1	30	7
			d8-toluene (Surrogate)	μg/L	-	10.0	9.9	30	0
			Bromofluorobenzene (Surrogate)	μg/L	-	10.3	9.7	30	5
		VPH F Bands	Benzene (F0)	μg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	μg/L	50	<50	<50	200	0
SE219026.002	LB223620.024		TRH C6-C10	μg/L	50	<50	<50	200	0
			TRH C6-C9	μg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	11.1	10.2	30	8

4/5/2021 Page 30 of 39



SE218964 R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Volatile Petroleum Hydrocarbons in Water (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE219026.002	LB223620.024	Surrogates	d8-toluene (Surrogate)	μg/L	-	10.0	9.9	30	1
			Bromofluorobenzene (Surrogate)	μg/L	-	10.4	9.8	30	6
		VPH F Bands	Benzene (F0)	μg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	μg/L	50	<50	<50	200	0

4/5/2021 Page 31 of 39





LABORATORY CONTROL SAMPLES

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil	Method: ME-(AU)-IENVIAN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223707.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	98
LB223708.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	93

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223666.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	100
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	100
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	104
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	99
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	110
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	73
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	97
LB223668.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	108
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	107
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	112
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	108
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	120
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	112
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	92

OP Pesticides in Soil

OP Pesticides in Soi	I					N	Method: ME-(Al	J)-[ENV]AN420
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223666.002		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	79
		Diazinon (Dimpylate)	mg/kg	0.5	2.1	2	60 - 140	107
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	97
		Ethion	mg/kg	0.2	1.9	2	60 - 140	93
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	99
LB223668.002		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	78
		Diazinon (Dimpylate)	mg/kg	0.5	1.8	2	60 - 140	88
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	93
		Ethion	mg/kg	0.2	1.6	2	60 - 140	81
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223666.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	111
LB223000.002		Acenaphthylene	mg/kg	0.1	4.1	4	60 - 140	102
		Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	114
		Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	114
		Anthracene	mg/kg	0.1	4.8	4	60 - 140	119
		Fluoranthene	mg/kg	0.1	4.5	4	60 - 140	114
		Pyrene	mg/kg	0.1	4.8	4	60 - 140	120
		Benzo(a)pyrene	mg/kg	0.1	4.8	4	60 - 140	119
	Surrogates	d5-nitrobenzene (Surrogate)			0.5	0.5	40 - 130	103
	Surrogates	, , ,	mg/kg	-	0.5	0.5	40 - 130	95
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	99
		d14-p-terphenyl (Surrogate)	mg/kg					
LB223668.002		Naphthalene	mg/kg	0.1	4.8	4	60 - 140	120
		Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	105
		Acenaphthene	mg/kg	0.1	4.8	4	60 - 140	120
		Phenanthrene	mg/kg	0.1	4.3	4	60 - 140	107
		Anthracene	mg/kg	0.1	4.5	4	60 - 140	111
		Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	105
		Pyrene	mg/kg	0.1	4.7	4	60 - 140	118
		Benzo(a)pyrene	mg/kg	0.1	4.4	4	60 - 140	110
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	113
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	109
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95

PCBs in Soil

Sample Number Parameter

Method: ME-(AU)-[ENV]AN420

4/5/2021 Page 32 of 39



LABORATORY CONTROL SAMPLES

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

PCBs in Soil (continued)	Method: ME-(AU)-IENVIAN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223666.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	97
LB223668.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	125

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223702.002	Arsenic, As	mg/kg	1	350	318.22	80 - 120	111
	Cadmium, Cd	mg/kg	0.3	4.4	4.81	70 - 130	91
	Chromium, Cr	mg/kg	0.5	46	38.31	80 - 120	119
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	105
	Lead, Pb	mg/kg	1	95	89.9	80 - 120	106
	Zinc, Zn	mg/kg	2	290	273	80 - 120	105
LB223703.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	104
	Cadmium, Cd	mg/kg	0.3	4.2	4.81	70 - 130	88
	Chromium, Cr	mg/kg	0.5	37	38.31	80 - 120	96
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	106
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	270	273	80 - 120	101

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223492.002	Arsenic, As	μg/L	1	20	20	80 - 120	102
	Cadmium, Cd	μg/L	0.1	22	20	80 - 120	110
	Chromium, Cr	μg/L	1	21	20	80 - 120	107
	Copper, Cu	μg/L	1	22	20	80 - 120	108
	Lead, Pb	μg/L	1	23	20	80 - 120	115
	Nickel, Ni	μg/L	1	22	20	80 - 120	110
	Zinc, Zn	μg/L	5	23	20	80 - 120	114

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223666.002		TRH C10-C14	mg/kg	20	42	40	60 - 140	105
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	95
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	93
	TRH F Bands	TRH >C10-C16	mg/kg	25	40	40	60 - 140	100
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	95
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	110
LB223668.002		TRH C10-C14	mg/kg	20	43	40	60 - 140	108
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	95
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	88
	TRH F Bands	TRH >C10-C16	mg/kg	25	41	40	60 - 140	103
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	93
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223496.002		TRH C10-C14	μg/L	50	1300	1200	60 - 140	110
		TRH C15-C28	μg/L	200	1500	1200	60 - 140	125
		TRH C29-C36	μg/L	200	1500	1200	60 - 140	125
	TRH F Bands	TRH >C10-C16	μg/L	60	1500	1200	60 - 140	123
		TRH >C16-C34 (F3)	μg/L	500	1500	1200	60 - 140	128
		TRH >C34-C40 (F4)	μg/L	500	680	600	60 - 140	114

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Numbe	r	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223669.002	Monocyclic	Benzene	mg/kg	0.1	4.7	5	60 - 140	94
	Aromatic	Toluene	mg/kg	0.1	5.0	5	60 - 140	99
		Ethylbenzene	mg/kg	0.1	5.2	5	60 - 140	105
		m/p-xylene	mg/kg	0.2	10	10	60 - 140	104
		o-xylene	mg/kg	0.1	5.3	5	60 - 140	107
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.9	10	70 - 130	99

4/5/2021 Page 33 of 39





LABORATORY CONTROL SAMPLES

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)	Method: ME-(AU)-IENVIAN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223669.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	10.6	10	70 - 130	106
		Bromofluorobenzene (Surrogate)	mg/kg	-	7.5	10	70 - 130	75
LB223671.002	Monocyclic	Benzene	mg/kg	0.1	4.7	5	60 - 140	94
	Aromatic	Toluene	mg/kg	0.1	4.9	5	60 - 140	97
		Ethylbenzene	mg/kg	0.1	5.2	5	60 - 140	104
		m/p-xylene	mg/kg	0.2	10	10	60 - 140	102
		o-xylene	mg/kg	0.1	5.2	5	60 - 140	103
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.0	10	70 - 130	120
		d8-toluene (Surrogate)	mg/kg	-	11.8	10	70 - 130	118
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.5	10	70 - 130	115

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223620.002	Monocyclic	Benzene	μg/L	0.5	42	45.45	60 - 140	93
	Aromatic	Toluene	μg/L	0.5	47	45.45	60 - 140	104
		Ethylbenzene	μg/L	0.5	48	45.45	60 - 140	105
		m/p-xylene	μg/L	1	99	90.9	60 - 140	109
		o-xylene	μg/L	0.5	48	45.45	60 - 140	106
	Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	11.1	10	60 - 140	111
		d8-toluene (Surrogate)	μg/L	-	9.8	10	70 - 130	98
		Bromofluorobenzene (Surrogate)	μg/L	-	10.4	10	70 - 130	104

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
	TRH C6-C10	mg/kg	25	80	92.5	60 - 140	86
	TRH C6-C9	mg/kg	20	71	80	60 - 140	89
Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg		9.9	10	70 - 130	99
	Bromofluorobenzene (Surrogate)	mg/kg		7.5	10	70 - 130	75
VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	49	62.5	60 - 140	78
	TRH C6-C10	mg/kg	25	72	92.5	60 - 140	77
	TRH C6-C9	mg/kg	20	64	80	60 - 140	80
Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.0	10	70 - 130	120
	Bromofluorobenzene (Surrogate)	mg/kg	-	11.5	10	70 - 130	115
VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	41	62.5	60 - 140	66
	VPH F Bands Surrogates	TRH C6-C10	TRH C6-C10 mg/kg TRH C6-C9 mg/kg Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg Bromofluorobenzene (Surrogate) mg/kg VPH F Bands TRH C6-C10 minus BTEX (F1) mg/kg TRH C6-C10 mg/kg TRH C6-C9 mg/kg Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg Bromofluorobenzene (Surrogate) mg/kg	TRH C6-C10 mg/kg 25 TRH C6-C9 mg/kg 20 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - Bromofluorobenzene (Surrogate) mg/kg - VPH F Bands TRH C6-C10 minus BTEX (F1) mg/kg 25 TRH C6-C10 mg/kg 25 TRH C6-C9 mg/kg 20 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - Bromofluorobenzene (Surrogate) mg/kg -	TRH C6-C10 mg/kg 25 80 TRH C6-C9 mg/kg 20 71 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - 9.9 Bromofluorobenzene (Surrogate) mg/kg - 7.5 VPH F Bands TRH C6-C10 minus BTEX (F1) mg/kg 25 49 TRH C6-C10 mg/kg 25 72 TRH C6-C9 mg/kg 20 64 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - 12.0 Bromofluorobenzene (Surrogate) mg/kg - 11.5	TRH C6-C10 mg/kg 25 80 92.5 TRH C6-C9 mg/kg 20 71 80 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - 9.9 10 Bromofluorobenzene (Surrogate) mg/kg - 7.5 10 VPH F Bands TRH C6-C10 minus BTEX (F1) mg/kg 25 49 62.5 TRH C6-C10 mg/kg 25 72 92.5 TRH C6-C9 mg/kg 20 64 80 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - 12.0 10 Bromofluorobenzene (Surrogate) mg/kg - 11.5 10	TRH C6-C10 mg/kg 25 80 92.5 60 - 140 TRH C6-C9 mg/kg 20 71 80 60 - 140 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - 9.9 10 70 - 130 VPH F Bands TRH C6-C10 minus BTEX (F1) mg/kg - 7.5 10 70 - 130 VPH F Bands TRH C6-C10 minus BTEX (F1) mg/kg 25 49 62.5 60 - 140 TRH C6-C9 mg/kg 25 72 92.5 60 - 140 Surrogates d4-1,2-dichloroethane (Surrogate) mg/kg - 12.0 10 70 - 130 Bromofluorobenzene (Surrogate) mg/kg - 11.5 10 70 - 130

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB223620.002		TRH C6-C10	μg/L	50	810	946.63	60 - 140	85
		TRH C6-C9	μg/L	40	700	818.71	60 - 140	85
	Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	11.1	10	60 - 140	111
		d8-toluene (Surrogate)	μg/L	-	9.8	10	70 - 130	98
		Bromofluorobenzene (Surrogate)	μg/L	-	10.4	10	70 - 130	104
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	μg/L	50	520	639.67	60 - 140	82

4/5/2021 Page 34 of 39



MATRIX SPIKES

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218950.001	LB223708.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	88
SE218964.001	LB223707.004	Mercury	mg/kg	0.05	0.20	<0.05	0.2	86

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recove
218964.001	LB223666.004		Naphthalene	mg/kg	0.1	4.4	<0.1	4	110
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.6	<0.1	4	115
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	110
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.5	0.3	4	106
			Anthracene	mg/kg	0.1	4.7	0.1	4	114
			Fluoranthene	mg/kg	0.1	5.0	0.6	4	10
			Pyrene	mg/kg	0.1	5.2	0.6	4	11
			Benzo(a)anthracene	mg/kg	0.1	0.2	0.2	-	-
			Chrysene	mg/kg	0.1	0.3	0.3	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	0.3	_	_
			Benzo(k)fluoranthene	mg/kg	0.1	0.1	0.1	_	_
			Benzo(a)pyrene	mg/kg	0.1	5.1	0.3	4	12
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.2		
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1		
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.2		
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.1</td><td>5.2</td><td>0.4</td><td></td><td></td></lor=0<>	TEQ (mg/kg)	0.1	5.2	0.4		
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>5.3</td><td>0.5</td><td></td><td></td></lor=lor<>	TEQ (mg/kg)	0.3	5.3	0.5		
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>5.2</td><td>0.4</td><td></td><td></td></lor=lor>	TEQ (mg/kg)	0.2	5.2	0.4		
			Total PAH (18)	mg/kg	0.8	39	3.2		
		Surrogates	d5-nitrobenzene (Surrogate)		-	0.5	0.5		10
		Surrogates		mg/kg		0.5	0.4		
			2-fluorobiphenyl (Surrogate)	mg/kg		0.5	0.4		90
18964.021	LB223668.004		d14-p-terphenyl (Surrogate) Naphthalene	mg/kg	0.1	4.7	<0.1	4	11
10904.021	LB223000.004		·	mg/kg		<0.1		- 4	
			2-methylnaphthalene	mg/kg	0.1		<0.1		
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.1	<0.1	4	10
			Acenaphthene	mg/kg	0.1	4.9	<0.1	4	12
			Fluorene	mg/kg	0.1	<0.1	<0.1	<u>-</u>	-
			Phenanthrene	mg/kg	0.1	4.3	<0.1	4	10
			Anthracene	mg/kg	0.1	4.5	<0.1	4	11
			Fluoranthene	mg/kg	0.1	4.1	<0.1	4	10
			Pyrene	mg/kg	0.1	4.7	<0.1	4	11
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.2	<0.1	4	10
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>4.2</td><td><0.2</td><td>-</td><td>-</td></lor=0<>	TEQ (mg/kg)	0.2	4.2	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>4.4</td><td><0.3</td><td>-</td><td>-</td></lor=lor<>	TEQ (mg/kg)	0.3	4.4	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>4.3</td><td><0.2</td><td>-</td><td>-</td></lor=lor>	TEQ (mg/kg)	0.2	4.3	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	35	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	92
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	86
			d14-p-terphenyl (Surrogate)	mg/kg	_	0.4	0.4	_	80

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

QC Sample Sample Number Parameter Units LOR

Method: ME-(AU)-[ENV]AN040/AN320

4/5/2021 Page 35 of 39



MATRIX SPIKES

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218950.001	LB223703.004	Arsenic, As	mg/kg	1	50	1	50	96
		Cadmium, Cd	mg/kg	0.3	48	<0.3	50	95
		Chromium, Cr	mg/kg	0.5	62	9.8	50	105
		Copper, Cu	mg/kg	0.5	52	<0.5	50	104
		Nickel, Ni	mg/kg	0.5	52	1.4	50	101
		Lead, Pb	mg/kg	1	55	4	50	100
		Zinc, Zn	mg/kg	2	52	2.1	50	101
SE218964.001	LB223702.004	Arsenic, As	mg/kg	1	52	6	50	90
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	62	13	50	98
		Copper, Cu	mg/kg	0.5	56	9.2	50	93
		Nickel, Ni	mg/kg	0.5	55	5.5	50	99
		Lead, Pb	mg/kg	1	64	24	50	80
		Zinc, Zn	mg/kg	2	73	28	50	89

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

							•	,
QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218957.010	LB223492.004	Arsenic, As	μg/L	1	21	<1	20	105
		Cadmium, Cd	μg/L	0.1	22	<0.1	20	111
		Chromium, Cr	μg/L	1	22	<1	20	109
		Copper, Cu	μg/L	1	22	<1	20	110
		_Lead, Pb	μg/L	1	23	<1	20	116
		Nickel, Ni	μg/L	1	23	<1	20	114
		Zinc, Zn	μg/L	5	28	<5	20	122

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218964.001	LB223666.004		TRH C10-C14	mg/kg	20	42	<20	40	105
			TRH C15-C28	mg/kg	45	120	85	40	83
			TRH C29-C36	mg/kg	45	120	93	40	73
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	280	180	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	220	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	41	<25	40	103
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	37	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	180	150	40	60
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE218964.021	LB223668.004		TRH C10-C14	mg/kg	20	42	<20	40	105
			TRH C15-C28	mg/kg	45	<45	<45	40	100
			TRH C29-C36	mg/kg	45	<45	<45	40	100
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	40	<25	40	100
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	35	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	110
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218964.001	LB223669.004	Monocyclic	Benzene	mg/kg	0.1	3.9	<0.1	5	79
		Aromatic	Toluene	mg/kg	0.1	4.2	<0.1	5	84
			Ethylbenzene	mg/kg	0.1	4.6	<0.1	5	91
			m/p-xylene	mg/kg	0.2	9.2	<0.2	10	92
			o-xylene	mg/kg	0.1	4.7	<0.1	5	94
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	7.9	10	89
			d8-toluene (Surrogate)	mg/kg	-	9.4	8.3	10	94
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.7	6.4	10	67 ①
		Totals	Total Xylenes	mg/kg	0.3	14	<0.3	-	-
			Total BTEX	mg/kg	0.6	27	<0.6	-	-
SE218964.021	LB223671.004	Monocyclic	Benzene	mg/kg	0.1	4.4	<0.1	5	89

4/5/2021 Page 36 of 39



MATRIX SPIKES

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)	Method: ME-(AU)-IENVIAN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218964.021	LB223671.004	Monocyclic	Toluene	mg/kg	0.1	4.6	<0.1	5	93
		Aromatic	Ethylbenzene	mg/kg	0.1	5.0	<0.1	5	100
			m/p-xylene	mg/kg	0.2	10	<0.2	10	100
			o-xylene	mg/kg	0.1	5.0	<0.1	5	100
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.5	10.9	10	105
			d8-toluene (Surrogate)	mg/kg	-	10.4	10.9	10	104
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.1	10.6	10	101
		Totals	Total Xylenes	mg/kg	0.3	15	<0.3	-	-
			Total BTEX	mg/kg	0.6	29	<0.6	-	-

VOCs in Water

Method: ME-(/	AU)-[ENV	AN433
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QC Sample	Sample Numbe	r	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE219026.001	LB223620.026	Monocyclic	Benzene	μg/L	0.5	47	<0.5	45.45	104
		Aromatic	Toluene	μg/L	0.5	47	<0.5	45.45	104
			Ethylbenzene	μg/L	0.5	48	<0.5	45.45	106
			m/p-xylene	μg/L	1	96	<1	90.9	105
			o-xylene	μg/L	0.5	48	<0.5	45.45	105
		Polycyclic	Naphthalene	μg/L	0.5	48	<0.5	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	10.3	11.0	-	103
			d8-toluene (Surrogate)	μg/L	-	9.9	10.0	-	99
			Bromofluorobenzene (Surrogate)	μg/L	-	9.9	10.4	-	99

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE218964.001	LB223669.004		TRH C6-C10	mg/kg	25	83	<25	92.5	89
			TRH C6-C9	mg/kg	20	69	<20	80	85
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.9	7.9	10	89
			d8-toluene (Surrogate)	mg/kg	-	9.4	8.3	10	94
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.7	6.4	-	67
		VPH F	Benzene (F0)	mg/kg	0.1	3.9	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	56	<25	62.5	89
SE218964.021	LB223671.004		TRH C6-C10	mg/kg	25	67	<25	92.5	73
			TRH C6-C9	mg/kg	20	60	<20	80	75
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.5	10.9	10	105
			d8-toluene (Surrogate)	mg/kg	-	10.4	10.9	10	104
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.1	10.6	-	101
		VPH F	Benzene (F0)	mg/kg	0.1	4.4	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	38	<25	62.5	61

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE219026.001	LB223620.026		TRH C6-C10	μg/L	50	870	<50	946.63	92
			TRH C6-C9	μg/L	40	760	<40	818.71	92
		Surrogates	d4-1,2-dichloroethane (Surrogate)	μg/L	-	10.3	11.0	-	103
			d8-toluene (Surrogate)	μg/L	-	9.9	10.0	-	99
			Bromofluorobenzene (Surrogate)	μg/L	-	9.9	10.4	-	99
		VPH F	Benzene (F0)	μg/L	0.5		0	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	μg/L	50	580	<50	639.67	91

4/5/2021 Page 37 of 39



MATRIX SPIKE DUPLICATES

SE218964 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = $100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

4/5/2021 Page 38 of 39





Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

- * NATA accreditation does not cover the performance of this service.
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ® Results less than 5 times LOR preclude acceptance criteria for RPD.
- Recovery failed acceptance criteria due to matrix interference.
- ® Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- © LOR was raised due to sample matrix interference.
- ① LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ® Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ® Recovery failed acceptance criteria due to sample heterogeneity.
- LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

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4/5/2021 Page 39 of 39



ANALYTICAL REPORT





CLIENT DETAILS -

LABORATORY DETAILS

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Facsimile Email andrew.ibrahim@eiaustralia.com.au

E25077 Hughes, Waratah, Wharf Melrose Pk Project E25077 Order Number

29 Samples

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SGS Reference SE218964 R0

23 Apr 2021

04 May 2021 Date Reported

COMMENTS

Telephone

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report No:

Email

Date Received

ME320182

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifiers Yusuf Kuthpudin and Ravee Sivasubramaniam.

SIGNATORIES

Akheeqar BENIAMEEN Chemist

Kmln

Bennet LO

Senior Organic Chemist/Metals Chemis

Huong CRAWFORD **Production Manager**

S. Ravender.

Ly Kim HA Organic Section Head Ravee SIVASUBRAMANIAM Hygiene Team Leader

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Member of the SGS Group



Fibre Identification in soil

ANALYTICAL REPORT

- RESULTS -----

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w
SE218964.001	30-BH110M_2.2- 2.3	Soil	191g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.002	30-BH111M_0.2- 0.3	Soil	134g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218964.003	30-BH117_0.2-0. 3	Soil	182g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.004	112-BH101_0.3-0 .4	Soil	261g Clay, Sand, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.005	112-BH102_0.4-0 .5	Soil	260g Sand, Rocks, Bitumen	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.006	112-BH103_0.2-0 .3	Soil	325g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.007	112-BH104_0.2-0 .3	Soil	295g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.008	112-BH105_0.2-0 .3	Soil	142g Clay, Sand, Rocks, Concrete	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218964.009	112-BH106M_0.2 -0.3	Soil	217g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.010	112-BH106M_1.4 -1.5	Soil	109g Clay, Soil, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.011	112-BH107_0.2-0 .3	Soil	270g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.012	112-BH108_0.2-0 .3	Soil	243g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218964.013	112-BH108_0.7-0 .8	Soil	276g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.014	112-BH109_0.3-0 .4	Soil	254g Clay, Sand, Rocks, Concrete	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.015	112-BH109_0.7-0 .8	Soil	221g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.016	112-BH110M_0.2 -0.3	Soil	282g Clay, Sand, Rocks	21 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.017	112-BH111_0.2-0. 3	Soil	198g Clay, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.018	112-BH111_0.6-0. 7	Soil	206g Clay, Sand, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218964.019	112-BH112M_0.4 -0.5	Soil	217g Clay, Sand, Soil, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218964.020	112-BH113M_0.2 -0.3	Soil	220g Clay, Sand, Soil, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218964.021	32-BH101_0.1-0. 2	Soil	143g Clay, Sand, Soil, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01
SE218964.022	32-BH102_0.2-0. 3	Soil	248g Clay, Sand, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.023	2-BH103_0.3-0.4	Soil	252g Clay, Sand, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.024	2-BH103_0.9-1.0	Soil	208g Clay, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01
SE218964.025	32-BH104M_0.2- 0.3	Soil	236g Clay, Sand, Soil, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg Organic Fibres Detected	<0.01

4/05/2021 Page 2 of 4



<0.01

SGS

SE218964.029

32-BH107M_0.2-

0.3

Soil

190g Clay,

Sand, Rocks

ANALYTICAL REPORT

RESULTS -	Fibre Identification in soil Method AN602										
Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*					
SE218964.026	32-BH105_0.2-0. 3	Soil	166g Clay, Sand, Soil, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01					
SE218964.027	32-BH106_0.2-0. 3	Soil	171g Clay, Sand, Rocks	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01					
SE218964.028	32-BH106_1.4-1.	Soil	190g Clay, Soil,	22 Apr 2021	No Asbestos Found at reporting limit of 0.1g/kg	<0.01					

22 Apr 2021

No Asbestos Found at reporting limit of 0.1g/kg

4/05/2021 Page 3 of 4

SE218964 R0



METHOD SUMMARY

METHOD -

METHODOLOGY SUMMARY

AN602

Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.

AN602

Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.

AN602

AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602

The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):
- (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and
- (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES -

Amosite - Brown Asbestos NA - Not Analysed
Chrysotile - White Asbestos LNR - Listed, Not Required

Crocidolite - Blue Asbestos * - NATA accreditation does not cover the performance of this service .

Amphiboles - Amosite and/or Crocidolite ** - Indicative data, theoretical holding time exceeded.

*** - Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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4/05/2021 Page 4 of 4



ANALYTICAL REPORT

Manager

Address

Laboratory



Adam Atkinson

SGS Melbourne EH&S

10/585 Blackburn Road

Notting Hill Victoria 3168



LABORATORY DETAILS CLIENT DETAILS -

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SE218964 Order Number Samples

Project

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SGS Reference ME320182 R0

28 Apr 2021 Date Received 03 May 2021 Date Reported

COMMENTS

Address

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(14420).

PFAS was analysed from a glass jar instead of a plastic jar

MA1523: Some surrogate recovery out of range due to the sample matrix.

SIGNATORIES

Adam ATKINSON

Australian Chemistry Manager

SGS Australia Pty Ltd ABN 44 000 964 278



ME320182 R0

Pertuand Provide Pro	-
Perfluoropentanoic acid (PFPeA)	
Perfluoropentanoic acid (PFPeA)	
Perfluorohexanoic acid (PFHxA)	
Perfluorochanoic acid (PFHpA)	-
Perfluoroctanoic Acid (PFOA)	
Perfluoronanoic acid (PFNA)	_
Perfluorodecanoic acid (PFDA) mg/kg 0.0016 - - Perfluoroundecanoic acid (PFUnA) mg/kg 0.0016 - - Perfluorododecanoic acid (PFDA) mg/kg 0.0016 - - Perfluorotridecanoic acid (PFTDA) mg/kg 0.0016 - - Perfluorotetradecanoic acid (PFTDA) mg/kg 0.0016 - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0016 - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0022 - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0016 - - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0016 - - - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0016 -	_
Perfluoroundecanoic acid (PFUnA) mg/kg 0.0016 - - Perfluorododecanoic acid (PFDoA) mg/kg 0.0016 - - Perfluorotridecanoic acid (PFTrDA) mg/kg 0.0016 - - Perfluorotetradecanoic acid (PFTeDA) mg/kg 0.0016 - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0032 - - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0032 - - - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0032 - <td< td=""><td>_</td></td<>	_
Perfluorododecanoic acid (PFDoA) mg/kg 0.0016 - - Perfluorotridecanoic acid (PFTrDA) mg/kg 0.0016 - - Perfluorotetradecanoic acid (PFTeDA) mg/kg 0.0016 - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0032 - - Perfluorobexadecanoic acid (PFHxDA) mg/kg 0.0016 - - Perfluorobexade sulfonate (PFBS) mg/kg 0.0016 - - - Perfluorobexane sulfonate (PFHxS) mg/kg 0.0016 - - - - Perfluoroctane sulfonate (PFDS) mg/kg 0.0016 - - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - - Perfluoroncane sulfonate (PFNS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorododecane sulfonate (PFDoS) mg/kg 0.0016 - - - <t< td=""><td>-</td></t<>	-
Perfluorotridecanoic acid (PFTrDA) mg/kg 0.0016 - - - Perfluorotetradecanoic acid (PFTeDA) mg/kg 0.0016 - - - Perfluorobexadecanoic acid (PFTxDA) mg/kg 0.0032 - - - Perfluorobexane sulfonate (PFBS) mg/kg 0.0016 - - - Perfluoropentane sulfonate (PFPeS) mg/kg 0.0016 - - - Perfluorohexane sulfonate (PFHxS) mg/kg 0.0016 - - - Perfluoroctane sulfonate (PFHpS) mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - Perfluorononane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - <td>-</td>	-
Perfluorotetradecanoic acid (PFTeDA) mg/kg 0.0016 - - - Perfluorohexadecanoic acid (PFHxDA) mg/kg 0.0032 - - - Perfluorobutane sulfonate (PFBS) mg/kg 0.0016 - - - Perfluoropentane sulfonate (PFPeS) mg/kg 0.0016 - - - Perfluorohexane sulfonate (PFHxS) mg/kg 0.0016 - - - Perfluorocctane sulfonate (PFDS) mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - Perfluorononane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorobecane sulfonate (PFDS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - -	-
Perfluorohexadecanoic acid (PFHxDA) mg/kg 0.0032 - - - Perfluorobutane sulfonate (PFBS) mg/kg 0.0016 - - - Perfluoropentane sulfonate (PFPeS) mg/kg 0.0016 - - - Perfluorohexane sulfonate (PFHxS) mg/kg 0.0016 - - - Perfluorochane sulfonate (PFHpS) mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - Perfluoronane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorododecane sulfonate (PFDS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - -	-
Perfluorobutane sulfonate (PFBS) mg/kg 0.0016 - - - Perfluoropentane sulfonate (PFPeS) mg/kg 0.0016 - - - Perfluorohexane sulfonate (PFHxS) mg/kg 0.0016 - - - Perfluorobeptane sulfonate (PFHpS) mg/kg 0.0016 - - - Perfluorocctane sulfonate (PFOS) mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - - Perfluoronane sulfonate (PFDS) mg/kg 0.0016 - - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - - -	-
Perfluoropentane sulfonate (PFPeS) mg/kg 0.0016 - - - Perfluorohexane sulfonate (PFHxS) mg/kg 0.0016 - - - Perfluorohexane sulfonate (PFHpS) mg/kg 0.0016 - - - Perfluorocctane sulfonate (PFOS) mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - - Perfluoronane sulfonate (PFNS) mg/kg 0.0016 - - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - - -	-
Perfluoroheptane sulfonate (PFHpS) mg/kg 0.0016 - - - Perfluorooctane sulfonate (PFOS) mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - Perfluorononane sulfonate (PFNS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorododecane sulfonate (PFDS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - -	-
Perfluorooctane sulfonate (PFOS) mg/kg 0.0016 - - - Sum PFOS and PFHXS mg/kg 0.0016 - - - Perfluorononane sulfonate (PFNS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorododecane sulfonate (PFDoS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - -	-
Sum PFOS and PFHXS mg/kg 0.0016 - - - Perfluorononane sulfonate (PFNS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorododecane sulfonate (PFDoS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - -	-
Perfluorononane sulfonate (PFNS) mg/kg 0.0016 - - - Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorododecane sulfonate (PFDoS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - -	-
Perfluorodecane sulfonate (PFDS) mg/kg 0.0016 - - - Perfluorododecane sulfonate (PFDoS) mg/kg 0.0016 - - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - - -	-
Perfluorododecane sulfonate (PFDoS) mg/kg 0.0016 - - 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016 - -	-
1H,1H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS) mg/kg 0.0016	-
	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS) mg/kg 0.0016	-
	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS) mg/kg 0.0016	-
Perfluoroctane sulfonamide (PFOSA) mg/kg 0.0016	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA) mg/kg 0.008	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA) mg/kg 0.008	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol mg/kg 0.016	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol mg/kg 0.016	-
N-Methylperfluorooctanesulfonamidoacetic acid mg/kg 0.008	-
N-Ethylperfluorooctanesulfonamidoacetic Acid mg/kg 0.008	-
(13C4-PFBA) Isotopically Labelled Internal Recovery %	
(13C5-PFPeA) Isotopically Labelled Internal Recovery %	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery %	
(13C4-PFHpA) Isotopically Labelled Internal Recovery %	-
(13C4_PFOA) Isotopically Labelled Internal Recovery %	-
(13C9-PFNA) Isotopically Labelled Internal Recovery %	-
(13C6-PFDA) Isotopically Labelled Internal Recovery %	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery %	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery %	_
(13C2_PFTeDA) Isotopically Labelled Internal Recovery %	
(13C2-PFRXDA) Isotopically Labelled Internal Recovery %	
(13C3-PFHxS) Isotopically Labelled Internal Recovery %	-
(13C8-PFOS) Isotopically Labelled Internal Recovery %	
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery %	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery %	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery %	
(13C8-PFOSA) Isotopically Labelled Internal Recovery %	
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery %	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery %	- -
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery %	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery %	
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery %	
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery %	

Moisture Content Method: AN002 Tested: 30/4/2021



ME320182 R0

	\$	imple Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320182.002 Soil 21 Apr 2021 SE218964.002	ME320182.003 Soil 21 Apr 2021 SE218964.003	ME320182.004 Soil 22 Apr 2021 SE218964.004
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	-	-	-	-

03-May-2021 Page 3 of 23



ME320182 R0

		Sample Number Sample Matrix	ME320182.005 Soil	ME320182.006 Soil	ME320182.007 Soil	ME320182.008 Soil
		Sample Date	22 Apr 2021	21 Apr 2021	21 Apr 2021	21 Apr 2021
		Sample Name	SE218964.005	SE218964.006	SE218964.007	SE218964.008
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S			sted: 28/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	-	-	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	-	-	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	-	-	<0.0016
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	-	-	<0.0016
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	-	-	<0.008
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	-	-	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	-	-	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid (13C4-PFBA) Isotopically Labelled Internal Recovery	mg/kg	0.008	<0.008	-	-	<0.008 100
· , , , , , , , , , , , , , , , , , , ,	%	-	94	-	-	93
(13C5-PFPeA) Isotopically Labelled Internal Recovery (13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	153	-	-	144
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	121	-	-	113
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	_	121	-	-	114
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	_	111	-	-	106
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	_	110	_	-	91
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	82	-	-	78
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	89	-	-	81
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	45	-	-	46
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	19	-	-	18
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	111	-	-	113
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	97	-	-	103
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	92	-	-	99
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	77	-	-	75
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	41	-	-	37
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	46	-	-	48
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	79	-	-	83
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	59	-	-	51
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	44	-	-	40
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	83	-	-	71
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	63	-	-	51
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	60	-	-	50
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	46	-	-	49

Moisture Content Method: AN002 Tested: 28/4/2021



ME320182 R0

		ample Number Sample Matrix Sample Date Sample Name	c Soil e 22 Apr 2021	ME320182.006 Soil 21 Apr 2021 SE218964.006	ME320182.007 Soil 21 Apr 2021 SE218964.007	ME320182.008 Soil 21 Apr 2021 SE218964.008
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 28/4/2	021 (continued)					
% Moisture*	%w/w	1	4.9	-	-	11.5

03-May-2021 Page 5 of 23



ME320182 R0

	\$	mple Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320182.010 Soil 21 Apr 2021 SE218964.010	ME320182.011 Soil 21 Apr 2021 SE218964.011	ME320182.012 Soil 21 Apr 2021 SE218964.012
Parameter Per- and Polyfluoroalkyl Substances (PFAS) in Solid S	Units	LOR A 1522 To	otod: 20/4/2024			
Per- and Polynuoroalkyl Substances (PPAS) in Solid S	amples Method: M	A-1523 Te	sted: 28/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	-	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	-	-	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	=
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	100	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	92	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	131	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	103	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	113	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	101	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	99	-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	101	-	-	=
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	105	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	85	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	46	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	105	-	-	=
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	96	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	98	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	74	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	39	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	50	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	98	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	65	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	57	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	96	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	82	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	69	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	61	-	-	-

Moisture Content Method: AN002 Tested: 28/4/2021



ME320182 R0

	S	mple Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320182.010 Soil 21 Apr 2021 SE218964.010	ME320182.011 Soil 21 Apr 2021 SE218964.011	ME320182.012 Soil 21 Apr 2021 SE218964.012
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	12.1	-	-	-

03-May-2021 Page 7 of 23



ME320182 R0

		Sample Number Sample Matrix	ME320182.013 Soil	ME320182.014 Soil	ME320182.015 Soil	ME320182.016 Soil
		Sample Date Sample Name	21 Apr 2021 SE218964.013	21 Apr 2021 SE218964.014	21 Apr 2021 SE218964.015	21 Apr 2021 SE218964.016
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S	amples Method	: MA-1523 Tes	sted: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	<0.0016	-	
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	0.0009	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	<0.0032	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	0.0049	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	0.034	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	0.039	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	<0.0016	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	<0.0016	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	0.0026	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	<0.0016	-	-
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	<0.0016	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	<0.008	-	<u> </u>
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	<0.008	-	
2-(N-Methylperfluorooctane sulfonamido)-ethanol 2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg mg/kg	0.016	-	<0.016	-	
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008		<0.008	_	
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	_	<0.008	_	
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	107	_	
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	_	_	102	_	
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	_	_	126	-	
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	_	_	102	-	-
(13C4 PFOA) Isotopically Labelled Internal Recovery	%	-	-	112	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	111	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	94	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-	80	-	=
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	80	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	47	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	16	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	95	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	95	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	123	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	72	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	48	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	53	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	67	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	48	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	36	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	74	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	59	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	50	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	41	-	-

Moisture Content Method: AN002 Tested: 30/4/2021



ME320182 R0

	\$	ample Number Sample Matrix Sample Date Sample Name	Soil 21 Apr 2021	ME320182.014 Soil 21 Apr 2021 SE218964.014	ME320182.015 Soil 21 Apr 2021 SE218964.015	ME320182.016 Soil 21 Apr 2021 SE218964.016
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	-	7.6	-	-

03-May-2021 Page 9 of 23



ME320182 R0

		Sample Number Sample Matrix	ME320182.017 Soil	ME320182.018 Soil	ME320182.019 Soil	ME320182.020 Soil
		Sample Date	22 Apr 2021	22 Apr 2021	22 Apr 2021	22 Apr 2021
		Sample Name	SE218964.017	SE218964.018	SE218964.019	SE218964.020
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid Sa	mples Method:	: MA-1523 Tes	ted: 30/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	<0.0016	0.0024
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	-	<0.0008	0.0073
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	<0.0016	0.0021
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	<0.0016	0.011
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	<0.0032	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	0.0098	0.0029
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	0.0098	0.0029
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	<0.0016	<0.0016
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	<0.0016	<0.0016
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	<0.008	<0.008
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	<0.008	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	<0.016	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	<0.016	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	<0.008	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	<0.008	<0.008
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	103	100
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	94	96
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	161	144
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	125	119
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	113	125
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	108	120
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	77	93
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-	-	68	93
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	80	87
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	62	25
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	19	9
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	124	113
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	90	96
(13C8-PFOS) Isotopically Labelled Internal Recovery (13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	103	121 82
	%	-	-	-	84 45	50
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery		-	-	-	45	46
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-		-		
(13C8-PFOSA) Isotopically Labelled Internal Recovery (D3-N-MeFOSA) Isotopically Labelled Internal Recovery	% %	-	-	-	115	107
	70		-	-	60	42
	0/		-		OU	28
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-			114	04
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery (D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	114	91
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery			- -	-	114 89 71	91 74 62

Moisture Content Method: AN002 Tested: 30/4/2021



ME320182 R0

	s	mple Number sample Matrix Sample Date Sample Name	Soil 22 Apr 2021	ME320182.018 Soil 22 Apr 2021 SE218964.018	ME320182.019 Soil 22 Apr 2021 SE218964.019	ME320182.020 Soil 22 Apr 2021 SE218964.020
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 28/4/3	2021 (continued)					
% Moisture*	%w/w	1	-	-	12.6	15.0

03-May-2021 Page 11 of 23



ME320182 R0

		Sample Number Sample Matrix Sample Date Sample Name	ME320182.021 Soil 22 Apr 2021 SE218964.021	ME320182.022 Soil 22 Apr 2021 SE218964.022	ME320182.023 Soil 22 Apr 2021 SE218964.023	ME320182.02 Soil 22 Apr 2021 SE218964.02
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid	Samples Method: I	WA-1523 Tes	sted: 28/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	-	-	-
Sum PFOS and PFHXS Perfluerance and sulface to (PENS)	mg/kg	0.0016 0.0016	<0.0016 <0.0016	-	-	-
Perfluorononane sulfonate (PFNS) Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	-	-	<u> </u>
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	-	-	
	mg/kg	0.0016	<0.0016	-	-	
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg mg/kg	0.0016	<0.0016	-	-	
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	-	-	
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	-	_	
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	-	_	
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	101	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	93	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	145	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	119	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	123	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	103	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	84	-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	88	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	99	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	94	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	42	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	109	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	95	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	110	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	76	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	40	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	48	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	83	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	69	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	55	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	84	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	73	-	-	-
			65			

Moisture Content Method: AN002 Tested: 28/4/2021



ME320182 R0

	s	mple Number sample Matrix Sample Date Sample Name	Soil 22 Apr 2021	ME320182.022 Soil 22 Apr 2021 SE218964.022	ME320182.023 Soil 22 Apr 2021 SE218964.023	ME320182.024 Soil 22 Apr 2021 SE218964.024
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	11.1	-	-	-

03-May-2021 Page 13 of 23



ME320182 R0

		Sample Number Sample Matrix	ME320182.025 Soil	ME320182.026 Soil	ME320182.027 Soil	ME320182.028 Soil
		Sample Date Sample Name	22 Apr 2021 SE218964.025	22 Apr 2021 SE218964.026	22 Apr 2021 SE218964.027	22 Apr 2021 SE218964.028
Parameter	Units	LOR				
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S			sted: 28/4/2021			
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	_	_	
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016			-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	-	-	
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	-	-	
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	-	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	-	-	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	102	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	93	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	129	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	105	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	106	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	96	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	95	-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	82	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	78	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	44	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	14	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	111	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	105	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	109	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	78	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	38	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	44	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	68	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	39	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	26	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	65	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	48	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	53	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	47	-	-	-

Moisture Content Method: AN002 Tested: 28/4/2021



ME320182 R0

		ample Number Sample Matrix Sample Date Sample Name	Soil 22 Apr 2021	ME320182.026 Soil 22 Apr 2021 SE218964.026	ME320182.027 Soil 22 Apr 2021 SE218964.027	ME320182.028 Soil 22 Apr 2021 SE218964.028
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/20	021 (continued)					
% Moisture*	%w/w	1	11.1	-	-	-

03-May-2021 Page 15 of 23



ME320182 R0

Parameter	S Units	ample Number Sample Matrix Sample Date Sample Name LOR	Soil 22 Apr 2021	ME320182.030 Soil 20 Feb 2021 SE218964.030	ME320182.031 Soil 22 Feb 2021 SE218964.031	ME320182.032 Soil 22 Feb 2021 SE218964.032
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S			sted: 28/4/2021			
Porfluorabutanaia gaid (PEPA)	malka	0.0016	<0.0016	_	_	_
Perfluorobutanoic acid (PFBA) Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016 0.0016	<0.0016 <0.0016	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg mg/kg	0.0016	<0.0016	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	_	_	_
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	_	_	_
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	_	_	_
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	-	-	-
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	-	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	-	-	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	100	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	92	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	133	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	105	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	114	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	112	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	87	-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	88	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	98	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	70	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	26	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	105	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	101	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	97	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	73	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	37	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	48	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	84	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	65	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	52	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	85	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	71	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	59	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	53	-	-	-

Moisture Content Method: AN002 Tested: 28/4/2021



ME320182 R0

			s	mple Number ample Matrix Sample Date Sample Name	Soil 22 Apr 2021	ME320182.030 Soil 20 Feb 2021 SE218964.030	ME320182.031 Soil 22 Feb 2021 SE218964.031	ME320182.032 Soil 22 Feb 2021 SE218964.032
Parameter			Units	LOR				
Moisture Content Method	l: AN002 Tes	sted: 30/4/2021	(continued)					
% Moisture*			%w/w	1	12.5	-	-	-

03-May-2021 Page 17 of 23



ME320182 R0

		Sample Number Sample Matrix Sample Date Sample Name	Soil 22 Feb 2021	ME320182.034 Water 22 Feb 2021 SE218964.034	ME320182.035 Soil 22 Feb 2021 SE218964.035	ME320182.036 Soil 22 Feb 2021 SE218964.036
Per- and Polyfluoroalkyl Substances (PFAS) in Solid S	Units amples Method:	LOR MA-1523 Te	sted: 30/4/2021			
	·					
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	-	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	-
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	-	-
Perfluoroctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	-
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	-
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-

Moisture Content Method: AN002 Tested: 30/4/2021



ME320182 R0

	\$	imple Number Sample Matrix Sample Date Sample Name	Soil 22 Feb 2021	ME320182.034 Water 22 Feb 2021 SE218964.034	ME320182.035 Soil 22 Feb 2021 SE218964.035	ME320182.036 Soil 22 Feb 2021 SE218964.036
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/4/2021	(continued)					
% Moisture*	%w/w	1	-	-	-	-

03-May-2021 Page 19 of 23



QC SUMMARY

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

Moisture Content Method: ME-(AU)-[ENV]AN002

	Parameter	QC	Units	LOR	DUP %RPD
Ш		Reference			
ı	% Moisture*	LB040859	%w/w	1	3 - 21%

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523

Parameter	QC Reference	Units	LOR	МВ	DUP %RPD	LCS %Recover
Perfluorobutanoic acid (PFBA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentanoic acid (PFPeA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexanoic acid (PFHxA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptanoic acid (PFHpA)	LB040858	mg/kg	0.0016	<0.0016	0%	75%
Perfluorooctanoic Acid (PFOA)	LB040858	mg/kg	0.0008	<0.0008	0%	84%
Perfluorononanoic acid (PFNA)	LB040858	mg/kg	0.0016	<0.0016	0%	103%
Perfluorodecanoic acid (PFDA)	LB040858	mg/kg	0.0016	<0.0016	0%	109%
Perfluoroundecanoic acid (PFUnA)	LB040858	mg/kg	0.0016	<0.0016	0%	101%
Perfluorododecanoic acid (PFDoA)	LB040858	mg/kg	0.0016	<0.0016	0%	110%
Perfluorotridecanoic acid (PFTrDA)	LB040858	mg/kg	0.0016	<0.0016	0%	91%
Perfluorotetradecanoic acid (PFTeDA)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexadecanoic acid (PFHxDA)	LB040858	mg/kg	0.0032	<0.0032	0%	NA
Perfluorobutane sulfonate (PFBS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentane sulfonate (PFPeS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexane sulfonate (PFHxS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptane sulfonate (PFHpS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorooctane sulfonate (PFOS)	LB040858	mg/kg	0.0016	<0.0016	0%	127%
Sum PFOS and PFHXS	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorononane sulfonate (PFNS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorodecane sulfonate (PFDS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
Perfluorododecane sulfonate (PFDoS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	LB040858	mg/kg	0.0016	<0.0016	0%	NA NA
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	LB040858		0.0016	<0.0016	0%	NA NA
		mg/kg			0%	NA NA
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	LB040858	mg/kg	0.0016	<0.0016		
Perfluoroctane sulfonamide (PFOSA)	LB040858	mg/kg	0.0016	<0.0016	0%	74%
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	LB040858	mg/kg	0.008	<0.008	0%	NA
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	LB040858	mg/kg	0.008	<0.008	0%	NA
2-(N-Methylperfluorooctane sulfonamido)-ethanol (N-MeFOSE)	LB040858	mg/kg	0.016	<0.016	0%	NA
2-(N-Ethylperfluorooctane sulfonamido)-ethanol (N-EtFOSE)	LB040858	mg/kg	0.016	<0.016	0%	NA
N-Methylperfluorooctanesulfonamidoacetic acid (N_MeFOSAA)	LB040858	mg/kg	0.008	<0.008	0%	NA
N-Ethylperfluorooctanesulfonamidoacetic Acid (N-EtFOSAA)	LB040858	mg/kg	0.008	<0.008	0%	NA
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	99%	0 - 1%	99%
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	88%	1%	90%
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	136%	0 - 10%	144%
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	108%	1 - 10%	119%
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	112%	8 - 9%	118%
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	110%	2 - 3%	114%
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	109%	19%	98%
(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	87%	6 - 11%	98%
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	84%	5 - 6%	96%
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	49%	9 - 59%	76%
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	11%	26 - 76%	32%
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	123%	2 - 5%	117%
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	102%	0 - 13%	100%
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	115%	5 - 6%	108%
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	89%	1 - 4%	84%
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	47%	3 - 9%	46%
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	55%	5 - 11%	51%
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	101%	2 - 7%	99%
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	65%	1 - 80%	69%
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	LB040858	%	1	59%	10 - 95%	56%

03-May-2021 Page 20 of 23



QC SUMMARY



MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 (continued)

				MB	DUP %RPD	LCS %Recovery
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	92%	0 - 6%	98%
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	79%	11%	91%
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	65%	4 - 9%	70%
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	LB040858	%	-	69%	9 - 11%	58%

03-May-2021 Page 21 of 23



METHOD SUMMARY

ME320182 R0

METHOD

METHODOLOGY SUMMARY

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

MA-1523

This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

03-May-2021 Page 22 of 23







FOOTNOTES

IS Insufficient sample for analysis. LOR Limit of Reporting LNR Sample listed, but not received. Raised or Lowered Limit of Reporting ↑↓ NATA accreditation does not cover the OFH QC result is above the upper tolerance performance of this service QFI QC result is below the lower tolerance Indicative data, theoretical holding time exceeded. The sample was not analysed for this analyte Indicates that both * and ** apply. NVI Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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This report must not be reproduced, except in full.

03-May-2021 Page 23 of 23







CLIENT DETAILS -

LABORATORY DETAILS

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E25077 Hughes, Waratah, Wharf Melrose Pk SE218963ARE R0 Project SGS Reference E25077

10/5/2021 Order Number Date Received 29 11/5/2021 Samples Date Reported

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

Shane MCDERMOTT

Inorganic/Metals Chemist

Teresa NGUYEN

Organic Chemist





ANALYTICAL RESULTS

TCLP (Toxicity Characteristic Leaching Procedure) for Organics/SVOC [AN006] Tested: 10/5/2021

			30-BH104_0.4-0.5
			SOIL - 20/4/2021
PARAMETER	UOM	LOR	SE218963ARE.012
pH 1:20	pH Units	-	9.8
pH 1:20 plus HCL	pH Units	-	6.1
Extraction Solution Used	No unit	-	2
Mass of Sample Used*	g	-	25
Volume of ExtractionSolution Used*	mL	-	500
pH TCLP after 18 hours	pH Units	-	5.2

11/05/2021 Page 2 of 5



ANALYTICAL RESULTS

SE218963ARE R0

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract [AN420] Tested: 10/5/2021

			30-BH104_0.4-0.5
			SOIL
			-
			20/4/2021
PARAMETER	UOM	LOR	SE218963ARE.012
Benzo(a)pyrene	μg/L	0.1	<0.1

11/05/2021 Page 3 of 5



METHOD SUMMARY

SE218963ARE R0

METHOD	———— METHODOLOGY SUMMARY ————————————————————————————————————
AN006	Contaminants of interest in a waste material are leached out of the waste with a selected leaching solution under controlled conditions. The ratio of sample to extraction fluid is 100g to 2L (1 to 20 by mass). The concentration of each contaminant of interest is determined in the leachate by appropriate methods after separation from the sample by filtering. Base on USEPA 1311.
AN006	Extraction Fluid #1: This fluid is made by combining 128.6mL of dilute sodium hydroxide solution and 11.5mL glacial acetic acid with water and diluting to a volume of 2 litres. The pH of this fluid should be 4.93 ± 0.05.
AN006	Extraction Fluid #2: This fluid is made by diluting 5.7mL glacial acetic acid with water to a volume of 1 litre. The pH of this fluid should be 2.88 ± 0.05.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN320	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
AN320	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

11/05/2021 Page 4 of 5





FOOTNOTES -

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

** Indicative data, theoretical holding time exceeded.

*** Indicates that both * and ** apply.

Not analysed.NVL Not validated.

IS Insufficient sample for

LNR analysis.

Sample listed, but not received.

UOM Unit of Measure.

LOR Limit of Reporting.

↑↓ Raised/lowered Limit of

Reporting.

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If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

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Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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11/05/2021 Page 5 of 5





STATEMENT OF QA/QC PERFORMANCE

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Project E25077 Hughes, Waratah, Wharf Melrose Pk SGS Reference SE218963ARE R0

 Order Number
 E25077
 Date Received
 10 May 2021

 Samples
 29
 Date Reported
 11 May 2021

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date TCLP (Toxicity Characteristic Leaching Procedure) for Organics/SVOC 1 item

Analysis Date TCLP (Toxicity Characteristic Leaching Procedure) for Organics/SVOC 1 item

SAMPLE SUMMARY

SGS Australia Pty Ltd ABN 44 000 964 278 Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd Alexandria NSW 2015 Alexandria NSW 2015 Australia Australia t +61 2 8594 0400 f +61 2 8594 0499

www.sgs.com.au



HOLDING TIME SUMMARY

SE218963ARE R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH104_0.4-0.5	SE218963ARE.01	LB224320	20 Apr 2021	10 May 2021	11 May 2021	10 May 2021	19 Jun 2021	11 May 2021

TCLP (Toxicity Characteristic Leaching Procedure) for Organics/SVOC

Method: ME-(AU)-[ENV]AN006

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
30-BH104_0.4-0.5	SE218963ARE.01	LB224293	20 Apr 2021	10 May 2021	04 May 2021	10 May 2021†	04 May 2021	11 May 2021†

11/5/2021 Page 2 of 9





Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	30-BH104_0.4-0.5	SE218963ARE.012	%	40 - 130%	52
d14-p-terphenyl (Surrogate)	30-BH104_0.4-0.5	SE218963ARE.012	%	40 - 130%	58
d5-nitrobenzene (Surrogate)	30-BH104_0.4-0.5	SE218963ARE.012	%	40 - 130%	46

11/5/2021 Page 3 of 9





METHOD BLANKS

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB224320.001		Benzo(a)pyrene	μg/L	0.1	<0.1
Surrogates		d5-nitrobenzene (Surrogate)	%	-	56
		2-fluorobiphenyl (Surrogate)	%	-	68
		d14-p-terphenyl (Surrogate)	%	-	88

11/5/2021 Page 4 of 9



DUPLICATES

SE218963ARE R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

11/5/2021 Page 5 of 9



LABORATORY CONTROL SAMPLES

SE218963ARE R0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in TCLP Extract

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB224320.002		Benzo(a)pyrene	μg/L	0.1	33	40	60 - 140	83
	Surrogates	d5-nitrobenzene (Surrogate)	μg/L	-	0.3	0.5	40 - 130	56
		2-fluorobiphenyl (Surrogate)	μg/L	-	0.3	0.5	40 - 130	66
		d14-p-terphenyl (Surrogate)	μg/L	-	0.4	0.5	40 - 130	78

11/5/2021 Page 6 of 9



MATRIX SPIKES

SE218963ARE R0

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report

Recovery is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample Sample Number Parameter Units LOR

11/5/2021 Page 7 of 9



MATRIX SPIKE DUPLICATES

SE218963ARE R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = $100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

11/5/2021 Page 8 of 9



FOOTNOTES

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

- * NATA accreditation does not cover the performance of this service.
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- 3 Results less than 5 times LOR preclude acceptance criteria for RPD.
- Recovery failed acceptance criteria due to matrix interference.
- ® Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- © LOR was raised due to sample matrix interference.
- ① LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ® Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- Recovery failed acceptance criteria due to sample heterogeneity.
- LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

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11/5/2021 Page 9 of 9







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Project E25077 Hughes, Waratah, Wharf Melrose Pk SGS Reference SE218931 R0 E25077 23/4/2021 Order Number Date Received 5 27/4/2021 Samples Date Reported

COMMENTS

Email

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES

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Field pH for Acid Sulphate Soil [AN104] Tested: 26/4/2021

			30-BH101_6.9-7.0	82-BH102M_5.4-5.5	30-BH106M_6.3-6.4	30-BH110M_7.0-7.1	30-BH111M_6.9-7.0
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 20/4/2021	- 20/4/2021	- 21/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218931.001	SE218931.002	SE218931.003	SE218931.004	SE218931.005
pHf	pH Units	-	7.8	6.8	7.9	7.1	7.3
pHfox	pH Units	-	6.3	4.9	6.5	5.1	6.7
Reaction Rate*	No unit	-	x	X	X	X	х
pH Difference*	pH Units	-10	1.5	1.8	1.4	2.0	0.6

27/04/2021 Page 2 of 3



METHOD SUMMARY

SE218931 R0

METHOD -

METHODOLOGY SUMMARY _

AN104

AN104

pHF is determined on an extract of approximately 2g of as received sample in approximately 10 mL of deionised water with pH determined after standing 30 minutes.

pHFox is determined on an extract of approximately 2g of as received sample with a few mLs of 30% hydrogen peroxide (adjusted to pH 4.5 to 5.5) with the extract reaction being rated from slight to extreme, with pH determined after reaction is complete and extract has cooled. Referenced to ASS Laboratory Methods Guidelines, method 23Af-Bf. 2004.

- 0 No Reaction
- 1 Slight Reaction
- 2 Moderate Reaction
- 3 Strong/High Reaction
- 4 Extreme/Vigorous Reaction (gas evolution and heat generation)

FOOTNOTES

 NATA accreditation does not cover the performance of this service.

Indicative data, theoretical holding time exceeded.

*** Indicates that both * and ** apply.

Not analysed.NVL Not validated.

IS Insufficient sample for analysis.

LNR Sample listed, but not received.

UOM Unit of Measure.

LOR Limit of Reporting.

↑↓ Raised/lowered Limit of

Reporting.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-qb/environment-health-and-safety.

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27/04/2021 Page 3 of 3







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Project E25077 Hughes, Waratah, Wharf Melrose Pk SGS Reference SE218931A R0 Order Number E25077 Date Received 28/4/2021

Samples 5 Date Reported 6/5/2021

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SPOCAS subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. Repoprt Number CE152374

SIGNATORIES

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SE218931A R0

Moisture Content [AN002] Tested: 6/5/2021

			30-BH101_6.9-7.0	82-BH102M_5.4-5.5	30-BH106M_6.3-6.4	30-BH110M_7.0-7.1
			SOIL	SOIL	SOIL	SOIL
			- 20/4/2021	- 20/4/2021	- 21/4/2021	- 21/4/2021
PARAMETER	UOM	LOR	SE218931A.001	SE218931A.002	SE218931A.003	SE218931A.004
% Moisture	%w/w	0.5	22	10	20	21

6/05/2021 Page 2 of 6





TAA (Titratable Actual Acidity) [AN219] Tested: 6/5/2021

			30-BH101_6.9-7.0	82-BH102M_5.4-5.5	30-BH106M_6.3-6.4	30-BH110M_7.0-7.1
			SOIL	SOIL	SOIL	SOIL
DISTURBE	HOM	1.00	20/4/2021	20/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218931A.001	SE218931A.002	SE218931A.003	SE218931A.004
pH KCI*	pH Units	-	8.7	9.6	9.1	8.0
Titratable Actual Acidity	kg H2SO4/T	0.25	<0.25	<0.25	<0.25	<0.25
Titratable Actual Acidity (TAA) moles H+/tonne	moles H+/T	5	<5	<5	<5	<5
Titratable Actual Acidity (TAA) S%w/w	%w/w S	0.01	<0.01	<0.01	<0.01	<0.01
Sulphur (SKCI)	%w/w	0.005	0.096	0.013	0.033	0.051
Calcium (CaKCI)	%w/w	0.005	0.26	0.17	0.28	0.15
Magnesium (MgKCI)	%w/w	0.005	0.054	0.020	0.023	0.060

6/05/2021 Page 3 of 6



TPA (Titratable Peroxide Acidity) [AN218] Tested: 6/5/2021

			30-BH101_6.9-7.0	82-BH102M_5.4-5.5	30-BH106M_6.3-6.4	30-BH110M_7.0-7.1
			SOIL - 20/4/2021	SOIL - 20/4/2021	SOIL - 21/4/2021	SOIL - 21/4/2021
PARAMETER	UOM	LOR	SE218931A.001	SE218931A.002	SE218931A.003	SE218931A.004
Peroxide pH (pH Ox)	pH Units	-	7.5	7.4	7.9	5.5
TPA as kg H₂SO₄/tonne	kg H2SO4/T	0.25	<0.25	<0.25	<0.25	<0.25
TPA as moles H+/tonne	moles H+/T	5	<5	<5	<5	<5
TPA as S % W/W	%w/w S	0.01	<0.01	<0.01	<0.01	<0.01
Titratable Sulfidic Acidity as moles H+/tonne	moles H+/T	5	<5	<5	<5	<5
Titratable Sulfidic Acidity as kg H ₂ SO ₄ /tonne	kg H2SO4/T	0.25	<0.25	<0.25	<0.25	<0.25
Titratable Sulfidic Acidity as S % W/W	%w/w S	0.01	<0.01	<0.01	<0.01	<0.01
ANCE as % CaCO ₃	% CaCO3	0.01	0.30	0.55	0.75	<0.01
ANCE as moles H+/tonne	moles H+/T	5	60	110	150	<5
ANCE as S % W/W	%w/w S	0.01	0.10	0.18	0.24	<0.01
Peroxide Oxidisable Sulphur (Spos)*	%w/w	0.005	0.16	<0.005	0.024	0.12
Peroxide Oxidisable Sulphur as moles H+/tonne*	moles H+/T	5	101	<5	15	77
Sulphur (Sp)	%w/w	0.005	0.26	0.016	0.057	0.18
Calcium (Cap)	%w/w	0.005	0.41	0.28	0.52	0.21
Reacted Calcium (CaA)*	%w/w	0.005	0.15	0.10	0.25	0.067
Reacted Calcium (CaA)*	moles H+/T	5	76	52	120	34
Magnesium (Mgp)	%w/w	0.005	0.081	0.031	0.029	0.079
Reacted Magnesium (MgA)*	%w/w	0.005	0.027	0.011	0.006	0.019
Reacted Magnesium (MgA)*	moles H+/T	5	22	9	<5	15
Net Acid Soluble Sulphur as % w/w*	%w/w	0.005	-	-	-	-
Net Acid Soluble Sulphur as moles H+/tonne*	moles H+/T	5	-	-	-	-

6/05/2021 Page 4 of 6





SPOCAS Net Acidity Calculations [AN220] Tested: 6/5/2021

			30-BH101_6.9-7.0	82-BH102M_5.4-5.5	30-BH106M_6.3-6.4	30-BH110M_7.0-7.
			2011			
			SOIL -	SOIL -	SOIL -	SOIL -
			20/4/2021	20/4/2021	21/4/2021	21/4/2021
PARAMETER	UOM	LOR	SE218931A.001	SE218931A.002	SE218931A.003	SE218931A.004
s-Net Acidity	%w/w S	0.005	0.097	<0.005	<0.005	0.12
a-Net Acidity	moles H+/T	5	61	<5	<5	77
Liming Rate*	kg CaCO3/T	0.1	4.5	<0.1	<0.1	5.8
Verification s-Net Acidity*	%w/w S	-20	-0.01	-0.12	-0.15	0.04
a-Net Acidity without ANCE*	moles H+/T	5	100	<5	15	77
Liming Rate without ANCE*	kg CaCO3/T	0.1	7.5	<0.1	NA	5.8

6/05/2021 Page 5 of 6



SE218931A R0

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN218	Soil samples are subjected to extreme oxidising conditions using hydrogen peroxide. Continuous application of heat and peroxide ensure all sulfide is converted to sulfuric acid. Excess peroxide is broken down by a copper catalyst prior to titration for acidity. Calcium, magnesium, and sulfur are determined by ICP-OES. Also included is a carbonate modification step which, depending on pH after the initial oxidation, gives a measure of ANC.
AN219	Dried pulped sample is extracted for 4 hours in a 1 M KCl solution. The ratio of sample to solution is 1:40. The extract is titrated for acidity. Calcium, magnesium, and sulfur are determined by ICP-AES.
AN220	SPOCAS Suite: Scheme for the calculation of net acidities and liming rates using a Fineness Factor of 1.5.

FOOTNOTES

NATA accreditation does not cover Not analysed. UOM Unit of Measure. NVL the performance of this service. Not validated. LOR Limit of Reporting. Indicative data, theoretical holding Insufficient sample for analysis. Raised/lowered Limit of IS $\uparrow \downarrow$ time exceeded. INR Sample listed, but not received. Reporting. Indicates that both * and ** apply.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-qb/environment-health-and-safety.

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6/05/2021 Page 6 of 6







CLIENT DETAILS -

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SE218931A Order Number

5 Samples

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CE152374 R0

30 Apr 2021 Date Received 05 May 2021 Date Reported

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(3146/19038)

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Member of the SGS Group



CE152374 R0

		Sample Number Sample Matrix Sample Date Sample Name	CE152374.001 Soil 20 Apr 2021 SE218931A.001	CE152374.002 Soil 20 Apr 2021 SE218931A.002	CE152374.003 Soil 21 Apr 2021 SE218931A.003	CE152374.00 Soil 21 Apr 2021 SE218931A.00
Parameter	Units	LOR				
Moisture Content Method: AN002 Tested: 30/	4/2021					
% Moisture	%w/w	0.5	22	10	20	21
, motorie	7,500	0.0				
TAA (Titratable Actual Acidity) Method: AN219	Tested: 4/5/2021					
рн ксі	pH Units	-	8.7	9.6	9.1	8.0
Titratable Actual Acidity	kg H2SO4/T	0.25	<0.25	<0.25	<0.25	<0.25
Titratable Actual Acidity (TAA) moles H+/tonne	moles H+/T	5	<5	<5	<5	<5
Titratable Actual Acidity (TAA) S%w/w	%w/w S	0.01	<0.01	<0.01	<0.01	<0.01
Sulphur (SKCI)	%w/w	0.005	0.096	0.013	0.033	0.051
Calcium (CaKCI)	%w/w	0.005	0.26	0.17	0.28	0.15
Magnesium (MgKCI)	%w/w	0.005	0.054	0.020	0.023	0.060
TPA (Titratable Peroxide Acidity) Method: AN21	8 Tested: 4/5/2021					
Peroxide pH (pH Ox)	pH Units	-	7.5	7.4	7.9	5.5
TPA as kg H₂SO₄/tonne	kg H2SO4/T	0.25	<0.25	<0.25	<0.25	<0.25
TPA as moles H+/tonne	moles H+/T	5	<5	<5	<5	<5
TPA as S % W/W	%w/w S	0.01	<0.01	<0.01	<0.01	<0.01
Titratable Sulfidic Acidity as moles H+/tonne	moles H+/T	5	<5	<5	<5	<5
Titratable Sulfidic Acidity as kg H₂SO₄/tonne	kg H2SO4/T	0.25	<0.25	<0.25	<0.25	<0.25
Titratable Sulfidic Acidity as S % W/W	%w/w S	0.01	<0.01	<0.01	<0.01	<0.01
ANCE as % CaCO ₃	% CaCO3	0.01	0.30	0.55	0.75	<0.01
ANCE as moles H+/tonne	moles H+/T	5	60	110	150	<5
ANCE as S % W/W	%w/w S	0.01	0.10	0.18	0.24	<0.01
Peroxide Oxidisable Sulphur (Spos)	%w/w	0.005	0.16	<0.005	0.024	0.12
Peroxide Oxidisable Sulphur as moles H+/tonne	moles H+/T	5	101	<5	15	77
Sulphur (Sp)	%w/w	0.005	0.26	0.016	0.057	0.18
Calcium (Cap)	%w/w	0.005	0.41	0.28	0.52	0.21
Reacted Calcium (CaA)	%w/w	0.005	0.15	0.10	0.25	0.067
Reacted Calcium (CaA)	moles H+/T	5	76	52	120	34
Magnesium (Mgp)	%w/w	0.005	0.081	0.031	0.029	0.079
Reacted Magnesium (MgA)	%w/w	0.005	0.027	0.011	0.006	0.019
Reacted Magnesium (MgA)	moles H+/T	5	22	9	<5	15
SPOCAS Net Acidity Calculations Method: AN2	20 Tested: 5/5/2021					
s-Net Acidity	%w/w S	0.005	0.097	<0.005	<0.005	0.12
a-Net Acidity	moles H+/T	5	61	<5	<5	77
Liming Rate	kg CaCO3/T	0.1	4.5	<0.1	<0.1	5.8
Verification s-Net Acidity	%w/w S	-20	-0.01	-0.12	-0.15	0.04
a-Net Acidity without ANCE	moles H+/T	5	100	<5	15	77
Liming Rate without ANCE	kg CaCO3/T	0.1	7.5	<0.1	NA	5.8

05-May-2021 Page 2 of 7



CE152374 R0

Sample Number CE152374.005
Sample Matrix Soil
Sample Date 21 Apr 2021
Sample Name SE218931A.005

Moisture Content Method: AN002 Tested: 4/5/2021

% Moisture %w/w 0.5

TAA (Titratable Actual Acidity) Method: AN219 Tested: 5/5/2021

pH KCI	pH Units	-	-
Titratable Actual Acidity	kg H2SO4/T	0.25	-
Titratable Actual Acidity (TAA) moles H+/tonne	moles H+/T	5	-
Titratable Actual Acidity (TAA) S%w/w	%w/w S	0.01	-
Sulphur (SKCI)	%w/w	0.005	-
Calcium (CaKCI)	%w/w	0.005	-
Magnesium (MgKCI)	%w/w	0.005	-

TPA (Titratable Peroxide Acidity) Method: AN218 Tested: 5/5/2021

Peroxide pH (pH Ox)	pH Units	-	-
TPA as kg H₂SO₄/tonne	kg H2SO4/T	0.25	-
TPA as moles H+/tonne	moles H+/T	5	-
TPA as S % W/W	%w/w S	0.01	-
Titratable Sulfidic Acidity as moles H+/tonne	moles H+/T	5	-
Titratable Sulfidic Acidity as kg H ₂ SO ₄ /tonne	kg H2SO4/T	0.25	-
Titratable Sulfidic Acidity as S % W/W	%w/w S	0.01	-
ANCE as % CaCO ₃	% CaCO3	0.01	-
ANCE as moles H+/tonne	moles H+/T	5	-
ANCE as S % W/W	%w/w S	0.01	-
Peroxide Oxidisable Sulphur (Spos)	%w/w	0.005	-
Peroxide Oxidisable Sulphur as moles H+/tonne	moles H+/T	5	-
Sulphur (Sp)	%w/w	0.005	-
Calcium (Cap)	%w/w	0.005	-
Reacted Calcium (CaA)	%w/w	0.005	-
Reacted Calcium (CaA)	moles H+/T	5	-
Magnesium (Mgp)	%w/w	0.005	-
Reacted Magnesium (MgA)	%w/w	0.005	-
Reacted Magnesium (MgA)	moles H+/T	5	-

05-May-2021 Page 3 of 7



Liming Rate without ANCE

ANALYTICAL REPORT

CE152374 R0

Sample Number CE152374.005
Sample Matrix Soil
Sample Date 21 Apr 2021
Sample Name SE218931A.005

0.1

Parameter	Units	LOR	
SPOCAS Net Acidity Calculations Method: AN220	Tested: 5/5/2021		
s-Net Acidity	%w/w S	0.005	
a-Net Acidity	moles H+/T	5	
Liming Rate	kg CaCO3/T	0.1	
Verification s-Net Acidity	%w/w S	-20	
a-Net Acidity without ANCE	moles H+/T	5	

kg CaCO3/T

05-May-2021 Page 4 of 7



QC SUMMARY

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

TAA (Titratable Actual Acidity) Method: ME-(AU)-[ENV]AN219

Parameter	QC Reference	Units	LOR	МВ	DUP %RPD	LCS %Recovery
pH KCI	LB089659	pH Units	-	6.0	7%	100%
Titratable Actual Acidity	LB089659	kg H2SO4/T	0.25	<0.25	0%	NA
Titratable Actual Acidity (TAA) moles H+/tonne	LB089659	moles H+/T	5	<5	0%	101%
Titratable Actual Acidity (TAA) S%w/w	LB089659	%w/w S	0.01	<0.01	0%	101%
Sulphur (SKCI)	LB089659	%w/w	0.005	<0.005	6%	87%
Calcium (CaKCI)	LB089659	%w/w	0.005	<0.005		94%
Magnesium (MgKCl)	LB089659	%w/w	0.005	<0.005		92%

TPA (Titratable Peroxide Acidity) Method: ME-(AU)-[ENV]AN218

•						
Parameter	QC	Units	LOR	MB	DUP %RPD	LCS
	Reference					%Recovery
Peroxide pH (pH Ox)	LB089658	pH Units	-	5.3	0%	97%
TPA as kg H ₂ SO ₄ /tonne	LB089658	kg H2SO4/T	0.25	0.37	0%	118%
TPA as moles H+/tonne	LB089658	moles H+/T	5	7	0%	117%
TPA as S % W/W	LB089658	%w/w S	0.01	0.01	0%	117%
ANCE as % CaCO ₃	LB089658	% CaCO3	0.01	<0.01	0%	
ANCE as moles H+/tonne	LB089658	moles H+/T	5	<5	0%	
ANCE as S % W/W	LB089658	%w/w S	0.01	<0.01	0%	
Sulphur (Sp)	LB089658	%w/w	0.005	<0.005	5%	90%
Calcium (Cap)	LB089658	%w/w	0.005	<0.005	4%	97%
Magnesium (Mgp)	LB089658	%w/w	0.005	<0.005	4%	95%

05-May-2021 Page 5 of 7



METHOD SUMMARY



METHOD —	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN218	Soil samples are subjected to extreme oxidising conditions using hydrogen peroxide. Continuous application of heat and peroxide ensure all sulfide is converted to sulfuric acid. Excess peroxide is broken down by a copper catalyst prior to titration for acidity. Calcium, magnesium, and sulfur are determined by ICP-OES. Also included is a carbonate modification step which, depending on pH after the initial oxidation, gives a measure of ANC.
AN219	Dried pulped sample is extracted for 4 hours in a 1 M KCl solution. The ratio of sample to solution is 1:40. The extract is titrated for acidity. Calcium, magnesium, and sulfur are determined by ICP-AES.
AN220	SPOCAS Suite: Scheme for the calculation of net acidities and liming rates using a Fineness Factor of 1.5.

05-May-2021 Page 6 of 7



FOOTNOTES



FOOTNOTES

IS Insufficient sample for analysis. LOR Limit of Reporting LNR Sample listed, but not received. Raised or Lowered Limit of Reporting ↑↓ NATA accreditation does not cover the OFH QC result is above the upper tolerance performance of this service QFL QC result is below the lower tolerance Indicative data, theoretical holding time exceeded. The sample was not analysed for this analyte Indicates that both * and ** apply. NVI Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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05-May-2021 Page 7 of 7





Huong Crawford



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 Project
 E25077 82 Hughes Ave, 30-32 Waratah St,
 SGS Reference
 SE219196 R0

 Order Number
 E25077
 Date Received
 3/5/2021

 Samples
 12
 Date Reported
 11/5/2021

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

1,4-Dioxan subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report number ME320293

SIGNATORIES

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Metals/Inorganics Team Leader

Ly Kim HA

Organic Section Head

kinly

Teresa NGUYEN

Organic Chemist



VOCs in Water [AN433] Tested: 6/5/2021

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
			-	-	-	-	- WAIER
DADAMETED	ном	LOD	30/4/2021	30/4/2021 SE219196.002	30/4/2021	30/4/2021 SE219196.004	30/4/2021
PARAMETER Benzene	UOM μg/L	LOR 0.5	SE219196.001 <0.5	<0.5	SE219196.003 <0.5	<0.5	SE219196.005 <0.5
Toluene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-xylene	µg/L	1	<1	<1	<1	<1	<1
o-xylene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes	μg/L	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	μg/L	3	<3	<3	<3	<3	<3
Naphthalene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane (CFC-12)	μg/L	5	<5	<5	<5	<5	<5
Chloromethane	μg/L	5	< 5	< 5	<5	<5	<5
Vinyl chloride (Chloroethene)	μg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Bromomethane	μg/L	10	<10	<10	<10	<10	<10
Chloroethane	μg/L	5	< 5	< 5	<5	<5	<5
Trichlorofluoromethane	μg/L	1	<1	<1	<1	<1	<1
Acetone (2-propanone)	μg/L	10	<10	<10	<10	<10	<10
Iodomethane	μg/L	5	<5	<5	<5	<5	<5
1,1-dichloroethene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acrylonitrile	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (Methylene chloride)	μg/L	5	<5	<5	<5	<5	<5
Allyl chloride	μg/L	2	<2	<2	<2	<2	<2
Carbon disulfide	μg/L	2	<2	<2	<2	<2	<2
trans-1,2-dichloroethene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MtBE (Methyl-tert-butyl ether)	μg/L	2	<2	<2	<2	<2	<2
1,1-dichloroethane	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl acetate	μg/L	10	<10	<10	<10	<10	<10
MEK (2-butanone)	μg/L	10	<10	<10	<10	<10	<10
cis-1,2-dichloroethene	µg/L	0.5	<0.5 <0.5	<0.5 <0.5	<0.5	11	<0.5 <0.5
Bromochloromethane Chloroform (TUM)	µg/L				<0.5	<0.5	
Chloroform (THM) 2.2-dichloropropane	µg/L	0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
1.2-dichloroethane	μg/L μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-trichloroethane	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dichloropropene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichloropropane	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene (Trichloroethylene,TCE)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitropropane	μg/L	100	<100	<100	<100	<100	<100
Bromodichloromethane (THM)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MIBK (4-methyl-2-pentanone)	μg/L	5	< 5	< 5	<5	<5	<5
cis-1,3-dichloropropene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-dichloropropene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-trichloroethane	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane (THM)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-hexanone (MBK)	μg/L	5	< 5	< 5	< 5	<5	<5
1,2-dibromoethane (EDB)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene (Perchloroethylene,PCE)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-tetrachloroethane	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform (THM)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,4-dichloro-2-butene	μg/L	1	<1	<1	<1	<1	<1
	F3'-						
Styrene (Vinyl benzene)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene (Vinyl benzene) 1,1,2,2-tetrachloroethane		0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5
	μg/L						

11/05/2021 Page 2 of 15



SE219196 R0

VOCs in Water [AN433] Tested: 6/5/2021 (continued)

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
							-
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.001	SE219196.002	SE219196.003	SE219196.004	SE219196.005
Isopropylbenzene (Cumene)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-propylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-chlorotoluene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-chlorotoluene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-trimethylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert-butylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-trimethylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
sec-butylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dichlorobenzene	μg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-isopropyltoluene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-butylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dibromo-3-chloropropane	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-trichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total VOC	μg/L	10	<10	<10	<10	22	<10

11/05/2021 Page 3 of 15



VOCs in Water [AN433] Tested: 6/5/2021 (continued)

			l	l			
			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1	GW_QD1	GW_QR1
			WATER -	WATER -	WATER -	WATER -	WATER -
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.006	SE219196.007	SE219196.008	SE219196.009	SE219196.010
Benzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-xylene	μg/L	1	<1	<1	<1	<1	<1
o-xylene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes	μg/L	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	μg/L	3	<3	<3	<3	<3	<3
Naphthalene	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane (CFC-12)	μg/L	5	<5	<5	< 5	-	-
Chloromethane	μg/L	5	<5	<5	< 5	-	-
Vinyl chloride (Chloroethene)	μg/L	0.3	<0.3	<0.3	<0.3	-	-
Bromomethane	μg/L	10	<10	<10	<10	-	-
Chloroethane	μg/L	5	<5	<5	<5	-	-
Trichlorofluoromethane	μg/L	1	<1	<1	<1	-	-
Acetone (2-propanone)	μg/L	10	<10	<10	<10	-	-
Iodomethane	μg/L	5	<5	<5	<5	-	-
1,1-dichloroethene	µg/L	0.5	<0.5	<0.5	<0.5		_
Acrylonitrile	μg/L	0.5	<0.5	<0.5	<0.5		-
Dichloromethane (Methylene chloride)		5					-
	μg/L		<5	<5	<5	-	
Allyl chloride	μg/L	2	<2	<2	<2	-	-
Carbon disulfide	μg/L	2	<2	<2	<2	-	-
trans-1,2-dichloroethene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
MtBE (Methyl-tert-butyl ether)	μg/L	2	<2	<2	<2	-	-
1,1-dichloroethane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Vinyl acetate	μg/L	10	<10	<10	<10	-	-
MEK (2-butanone)	μg/L	10	<10	<10	<10	-	-
cis-1,2-dichloroethene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Bromochloromethane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Chloroform (THM)	μg/L	0.5	<0.5	<0.5	<0.5	-	-
2,2-dichloropropane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2-dichloroethane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,1-trichloroethane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1-dichloropropene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Carbon tetrachloride	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Dibromomethane	μg/L	0.5	<0.5	<0.5	<0.5		_
1,2-dichloropropane	μg/L	0.5	<0.5	<0.5	<0.5		_
Trichloroethene (Trichloroethylene,TCE)	μg/L	0.5	<0.5	<0.5	<0.5		_
2-nitropropane	μg/L	100	<100	<100	<100	_	_
Bromodichloromethane (THM)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
MIBK (4-methyl-2-pentanone)	µg/L	5	<5	<5	<5	-	-
cis-1,3-dichloropropene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-dichloropropene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,2-trichloroethane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,3-dichloropropane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Dibromochloromethane (THM)	μg/L	0.5	<0.5	<0.5	<0.5	-	-
2-hexanone (MBK)	μg/L	5	<5	<5	<5	-	-
1,2-dibromoethane (EDB)	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethene (Perchloroethylene,PCE)	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-tetrachloroethane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Chlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Bromoform (THM)	μg/L	0.5	<0.5	<0.5	<0.5	-	-
cis-1,4-dichloro-2-butene	μg/L	1	<1	<1	<1	=	-
Styrene (Vinyl benzene)	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5		_
1,2,3-trichloropropane	μg/L	0.5	<0.5	<0.5	<0.5		_
							-
trans-1,4-dichloro-2-butene	μg/L	1	<1	<1	<1	-	-

11/05/2021 Page 4 of 15



SE219196 R0

VOCs in Water [AN433] Tested: 6/5/2021 (continued)

			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.006	SE219196.007	SE219196.008	SE219196.009	SE219196.010
Isopropylbenzene (Cumene)	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Bromobenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
n-propylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
2-chlorotoluene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
4-chlorotoluene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,3,5-trimethylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
tert-butylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2,4-trimethylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
sec-butylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,3-dichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,4-dichlorobenzene	μg/L	0.3	<0.3	<0.3	<0.3	-	-
p-isopropyltoluene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2-dichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
n-butylbenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2-dibromo-3-chloropropane	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2,4-trichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Hexachlorobutadiene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2,3-trichlorobenzene	μg/L	0.5	<0.5	<0.5	<0.5	-	-
Total VOC	μg/L	10	<10	<10	<10	-	-

11/05/2021 Page 5 of 15



VOCs in Water [AN433] Tested: 6/5/2021 (continued)

			GW_QTB1	GW_QTS1
			WATER	WATER
PARAMETER	UOM	LOR	30/4/2021 SE219196.011	30/4/2021 SE219196.012
Benzene	μg/L	0.5	<0.5	[100%]
Toluene	µg/L	0.5	<0.5	[104%]
Ethylbenzene	μg/L	0.5	<0.5	[103%]
m/p-xylene	µg/L	1	<1	[103%]
o-xylene	µg/L	0.5	<0.5	[104%]
Total Xylenes	µg/L	1.5	<1.5	
Total BTEX	µg/L	3	<3	
Naphthalene	µg/L	0.5	<0.5	[104%]
Dichlorodifluoromethane (CFC-12)	μg/L	5	-	-
Chloromethane	μg/L	5	_	_
Vinyl chloride (Chloroethene)	μg/L	0.3	-	
Bromomethane	μg/L	10	_	_
Chloroethane		5	<u>-</u>	_
Trichlorofluoromethane	µg/L	1	-	-
	µg/L	10	-	-
Acetone (2-propanone)	μg/L			
lodomethane	μg/L	5	-	-
1,1-dichloroethene	μg/L	0.5	-	-
Acrylonitrile	μg/L	0.5	-	-
Dichloromethane (Methylene chloride)	μg/L	5	-	-
Allyl chloride	μg/L	2	-	-
Carbon disulfide	μg/L	2	-	-
trans-1,2-dichloroethene	μg/L	0.5	-	-
MtBE (Methyl-tert-butyl ether)	μg/L	2	-	-
1,1-dichloroethane	μg/L	0.5	-	-
Vinyl acetate	μg/L	10	-	-
MEK (2-butanone)	μg/L	10	-	-
cis-1,2-dichloroethene	μg/L	0.5	-	-
Bromochloromethane	μg/L	0.5	-	-
Chloroform (THM)	μg/L	0.5	-	-
2,2-dichloropropane	μg/L	0.5	-	-
1,2-dichloroethane	μg/L	0.5	-	-
1,1,1-trichloroethane	μg/L	0.5	-	-
1,1-dichloropropene	μg/L	0.5	-	-
Carbon tetrachloride	μg/L	0.5	-	-
Dibromomethane	μg/L	0.5	-	-
1,2-dichloropropane	μg/L	0.5	-	-
Trichloroethene (Trichloroethylene,TCE)	μg/L	0.5	-	-
2-nitropropane	μg/L	100	-	-
Bromodichloromethane (THM)	μg/L	0.5	-	-
MIBK (4-methyl-2-pentanone)	μg/L	5	-	-
cis-1,3-dichloropropene	μg/L	0.5	-	-
trans-1,3-dichloropropene	μg/L	0.5	-	-
1,1,2-trichloroethane	μg/L	0.5	-	-
1,3-dichloropropane	μg/L	0.5	-	-
Dibromochloromethane (THM)	μg/L	0.5	-	-
2-hexanone (MBK)	μg/L	5	-	-
1,2-dibromoethane (EDB)	μg/L	0.5	-	-
Tetrachloroethene (Perchloroethylene,PCE)	μg/L	0.5	-	-
1,1,1,2-tetrachloroethane	μg/L	0.5	-	-
Chlorobenzene	µg/L	0.5	-	-
Bromoform (THM)	µg/L	0.5	-	-
cis-1,4-dichloro-2-butene	µg/L	1	-	-
Styrene (Vinyl benzene)	µg/L	0.5	-	-
1,1,2,2-tetrachloroethane	µg/L	0.5		
1,2,3-trichloropropane	μg/L	0.5	-	<u>-</u>
trans-1,4-dichloro-2-butene	μg/L	1	<u>-</u>	

11/05/2021 Page 6 of 15



SE219196 R0

VOCs in Water [AN433] Tested: 6/5/2021 (continued)

			GW_QTB1	GW_QTS1
			WATER	WATER
			- 30/4/2021	- 30/4/2021
PARAMETER	UOM	LOR	SE219196.011	SE219196.012
Isopropylbenzene (Cumene)	μg/L	0.5	-	-
Bromobenzene	μg/L	0.5	-	-
n-propylbenzene	μg/L	0.5	-	-
2-chlorotoluene	μg/L	0.5	-	-
4-chlorotoluene	μg/L	0.5	-	-
1,3,5-trimethylbenzene	μg/L	0.5	-	-
tert-butylbenzene	μg/L	0.5	-	-
1,2,4-trimethylbenzene	μg/L	0.5	-	-
sec-butylbenzene	μg/L	0.5	-	-
1,3-dichlorobenzene	μg/L	0.5	-	-
1,4-dichlorobenzene	μg/L	0.3	-	-
p-isopropyltoluene	μg/L	0.5	-	-
1,2-dichlorobenzene	μg/L	0.5	-	-
n-butylbenzene	μg/L	0.5	-	-
1,2-dibromo-3-chloropropane	μg/L	0.5	-	-
1,2,4-trichlorobenzene	μg/L	0.5	-	-
Hexachlorobutadiene	μg/L	0.5	-	-
1,2,3-trichlorobenzene	μg/L	0.5	-	-
Total VOC	μg/L	10	-	-

11/05/2021 Page 7 of 15





Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 6/5/2021

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
PARAMETER	UOM	LOR	30/4/2021 SE219196.001	30/4/2021 SE219196.002	30/4/2021 SE219196.003	30/4/2021 SE219196.004	30/4/2021 SE219196.005
TRH C6-C9	μg/L	40	<40	<40	<40	<40	<40
Benzene (F0)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10	μg/L	50	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1)	μg/L	50	<50	<50	<50	<50	<50

			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			- 30/4/2021	- 30/4/2021	- 30/4/2021	- 30/4/2021	- 30/4/2021
PARAMETER	UOM	LOR	SE219196.006	SE219196.007	SE219196.008	SE219196.009	SE219196.010
TRH C6-C9	μg/L	40	<40	<40	<40	<40	<40
Benzene (F0)	μg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10	μg/L	50	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1)	μg/L	50	<50	<50	<50	<50	<50

11/05/2021 Page 8 of 15



TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 5/5/2021

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
			- 30/4/2021	- 30/4/2021	30/4/2021	- 30/4/2021	- 30/4/2021
PARAMETER	UOM	LOR	SE219196.001	SE219196.002	SE219196.003	SE219196.004	SE219196.005
TRH C10-C14	μg/L	50	<50	<50	<50	<50	<50
TRH C15-C28	μg/L	200	<200	<200	<200	<200	<200
TRH C29-C36	μg/L	200	<200	<200	<200	<200	<200
TRH C37-C40	μg/L	200	<200	<200	<200	<200	<200
TRH >C10-C16	μg/L	60	<60	<60	<60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	μg/L	60	<60	<60	<60	<60	<60
TRH >C16-C34 (F3)	μg/L	500	<500	<500	<500	<500	<500
TRH >C34-C40 (F4)	μg/L	500	<500	<500	<500	<500	<500
TRH C10-C40	μg/L	320	<320	<320	<320	<320	<320

			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.006	SE219196.007	SE219196.008	SE219196.009	SE219196.010
TRH C10-C14	μg/L	50	<50	<50	<50	<50	<50
TRH C15-C28	μg/L	200	<200	<200	<200	<200	<200
TRH C29-C36	μg/L	200	<200	<200	<200	<200	<200
TRH C37-C40	μg/L	200	<200	<200	<200	<200	<200
TRH >C10-C16	μg/L	60	<60	<60	<60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	μg/L	60	<60	<60	<60	<60	<60
TRH >C16-C34 (F3)	μg/L	500	<500	<500	<500	<500	<500
TRH >C34-C40 (F4)	μg/L	500	<500	<500	<500	<500	<500
TRH C10-C40	μg/L	320	<320	<320	<320	<320	<320

11/05/2021 Page 9 of 15



PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 5/5/2021

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
			-	-	-	-	-
PARAMETER	UOM	LOR	30/4/2021 SE219196.001	30/4/2021 SE219196.002	30/4/2021 SE219196.003	30/4/2021 SE219196.004	30/4/2021 SE219196.005
Naphthalene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	μg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total PAH (18)	μg/L	1	<1	<1	<1	<1	<1

			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1
			WATER	WATER	WATER
			30/4/2021	30/4/2021	30/4/2021
PARAMETER	ИОМ	LOR	SE219196.006	SE219196.007	SE219196.008
Naphthalene	μg/L	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	μg/L	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	μg/L	0.1	<0.1	<0.1	<0.1
Acenaphthylene	μg/L	0.1	<0.1	<0.1	<0.1
Acenaphthene	μg/L	0.1	<0.1	<0.1	<0.1
Fluorene	μg/L	0.1	<0.1	<0.1	<0.1
Phenanthrene	μg/L	0.1	<0.1	<0.1	<0.1
Anthracene	μg/L	0.1	<0.1	<0.1	<0.1
Fluoranthene	μg/L	0.1	<0.1	<0.1	<0.1
Pyrene	μg/L	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	μg/L	0.1	<0.1	<0.1	<0.1
Chrysene	μg/L	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	μg/L	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	μg/L	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	μg/L	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	μg/L	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	μg/L	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	μg/L	0.1	<0.1	<0.1	<0.1
Total PAH (18)	μg/L	1	<1	<1	<1

11/05/2021 Page 10 of 15



Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 5/5/2021

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.001	SE219196.002	SE219196.003	SE219196.004	SE219196.005
Arsenic, As	μg/L	1	<1	4	2	80	7
Cadmium, Cd	μg/L	0.1	0.3	<0.1	1.1	<0.1	<0.1
Chromium, Cr	μg/L	1	1	<1	1	<1	<1
Copper, Cu	μg/L	1	5	7	21	15	9
Lead, Pb	μg/L	1	<1	<1	2	<1	<1
Nickel, Ni	μg/L	1	37	12	79	7	11
Zinc, Zn	μg/L	5	850	50	1400	83	99

			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			- 30/4/2021	- 30/4/2021	- 30/4/2021	- 30/4/2021	- 30/4/2021
PARAMETER	UOM	LOR	SE219196.006	SE219196.007	SE219196.008	SE219196.009	SE219196.010
Arsenic, As	μg/L	1	1	9	<1	1	<1
Cadmium, Cd	μg/L	0.1	<0.1	<0.1	0.1	<0.1	<0.1
Chromium, Cr	μg/L	1	2	<1	<1	2	<1
Copper, Cu	μg/L	1	6	1	15	2	<1
Lead, Pb	μg/L	1	<1	4	<1	<1	<1
Nickel, Ni	μg/L	1	6	2	8	5	<1
Zinc, Zn	μg/L	5	580	45	350	540	<5

11/05/2021 Page 11 of 15



SE219196 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 7/5/2021

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.001	SE219196.002	SE219196.003	SE219196.004	SE219196.005
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
							-
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.006	SE219196.007	SE219196.008	SE219196.009	SE219196.010
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

11/05/2021 Page 12 of 15



SE219196 R0

USEPA 8260B Additional VOCs in water [USEPA 8260B] Tested: 11/5/2021

			GW-82_BH102M-1	GW-Ei_MW01-1	GW-Ei_MW03-1	GW-30_BH102M-1	GW-30_BH106M-1
			WATER	WATER	WATER	WATER	WATER
							-
			30/4/2021	30/4/2021	30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.001	SE219196.002	SE219196.003	SE219196.004	SE219196.005
1,4-Dioxane*	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

			GW-30_BH110M-1	GW-30_BH111M-1	GW-112_BH113M-1
			WATER	WATER	WATER
					-
			30/4/2021	30/4/2021	30/4/2021
PARAMETER	UOM	LOR	SE219196.006	SE219196.007	SE219196.008
1,4-Dioxane*	mg/L	0.01	<0.01	<0.01	<0.01

11/05/2021 Page 13 of 15



METHOD SUMMARY

SE219196 R0

METHOD _

— METHODOLOGY SUMMARY —

A NO20

Unpreserved water sample is filtered through a 0.45 µm membrane filter and acidified with nitric acid similar to APHA3030B.

AN311(Perth)/AN312

Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.

AN318

Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).

AN403

Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.

AN403

Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoveerable Hydrocarbons - Silica (TRH-Silica) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the elluent solvents.

AN403

The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.

AN420

(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

AN433

VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

EPA8260B-ADD

This method is used to quantify additional Volatile Organic Compounds in aqueous samples using Gas Chromatography Mass Spectrometry coupled with a purge and trap sample concentrator. This method is based on USEPA 8260B (Volatile Organic Compounds by Gas Chromatography Mass Spectrometry GC/MS), using USEPA 5030B (Purge and Trap for aqueous samples).

FPA8260B-ADD

Aqueous samples are loaded onto the auto sampler in 40ml vials. A stream of helium is passed through a portion of the aqueous sample; the volatile components are 'purged' from the sample and are collected and concentrated on an adsorbent trap. The trap is rapidly heated and back-flushed with helium to 'desorb' the analytes onto the Gas Chromatographic column. The GC column separates the analytes and they are passed into the Mass Selective detector, which fragments the molecules and produces "mass spectra" of each compound.

11/05/2021 Page 14 of 15



SE219196 R0





FOOTNOTES -

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

** Indicative data, theoretical holding time exceeded.

*** Indicates that both * and ** apply.

Not analysed.NVL Not validated.

IS Insufficient sample for

LNR analysis.

Sample listed, but not received.

UOM Unit of Measure.

LOR Limit of Reporting.

↑↓ Raised/lowered Limit of

Reporting.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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11/05/2021 Page 15 of 15



LABORATORY DETAILS -CLIENT DETAILS -

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E25077 82 Hughes Ave, 30-32 Waratah St, SGS Reference ME320293 R0 Project SE219196 06 May 2021 Date Received Order Number 11 May 2021 Samples Date Reported

COMMENTS

Whilst SGS laboratories conform to ISO:17025 standards, results of analysis in this report fall outside of the current scope of NATA accreditation.

SIGNATORIES

Adam ATKINSON

Australian Chemistry Manager

SGS Australia Pty Ltd ABN 44 000 964 278



ME320293 R0

	Sa S	nple Number Imple Matrix Sample Date Imple Name	ME320293.001 Water 30 Apr 2021 SE219196.001	ME320293.002 Water 30 Apr 2021 SE219196.002	ME320293.003 Water 30 Apr 2021 SE219196.003	ME320293.004 Water 30 Apr 2021 SE219196.004	
Parameter	Units	LOR					
USEPA 8260B Additional VOCs in water Method: USEPA 8260B Tested: 6/5/2021							
1,4-Dioxane	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	

11-May-2021 Page 2 of 7



ME320293 R0

	Sa S	nple Number Imple Matrix Sample Date Imple Name	ME320293.005 Water 30 Apr 2021 SE219196.005	ME320293.006 Water 30 Apr 2021 SE219196.006	ME320293.007 Water 30 Apr 2021 SE219196.007	ME320293.008 Water 30 Apr 2021 SE219196.008	
Parameter	Units	LOR					
USEPA 8260B Additional VOCs in water Method: USEPA 8260B Tested: 6/5/2021							
1,4-Dioxane	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	

11-May-2021 Page 3 of 7



ME320293 R0

		Sample Number Sample Matrix Sample Date Sample Name	Water 30 Apr 2021	ME320293.010 Water 30 Apr 2021 SE219196.010	ME320293.011 Water 30 Apr 2021 SE219196.011	ME320293.012 Water 30 Apr 2021 SE219196.012
Parameter	U	nits LOR				
USEPA 8260B Additional VOCs in water	Method: USEPA 8260B	Tested: 11/5/2021				

11-May-2021 Page 4 of 7







MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula: the absolute difference of the two results divided by the average of the two results as a percentage. Where the DUP RPD is 'NA', the results are less than the LOR and thus the RPD is not applicable.

USEPA 8260B Additional VOCs in water Method: USEPA 8260B

Parameter	QC	Units	LOR	MB	DUP %RPD	LCS
	Reference					%Recovery
1,4-Dioxane	LB041093	mg/L	0.01	<0.01	0%	108%

11-May-2021 Page 5 of 7



METHOD SUMMARY

ME320293 R0

METHOD -

METHODOLOGY SUMMARY

EPA8260B-ADD

This method is used to quantify additional Volatile Organic Compounds in aqueous samples using Gas Chromatography Mass Spectrometry coupled with a purge and trap sample concentrator. This method is based on USEPA 8260B (Volatile Organic Compounds by Gas Chromatography Mass Spectrometry GC/MS), using USEPA 5030B (Purge and Trap for aqueous samples).

EPA8260B-ADD

Aqueous samples are loaded onto the auto sampler in 40ml vials. A stream of helium is passed through a portion of the aqueous sample; the volatile components are 'purged' from the sample and are collected and concentrated on an adsorbent trap. The trap is rapidly heated and back-flushed with helium to 'desorb' the analytes onto the Gas Chromatographic column. The GC column separates the analytes and they are passed into the Mass Selective detector, which fragments the molecules and produces "mass spectra" of each compound.

11-May-2021 Page 6 of 7



FOOTNOTES



IS Insufficient sample for analysis. LOR Limit of Reporting LNR Sample listed, but not received. Raised or Lowered Limit of Reporting ↑↓ NATA accreditation does not cover the OFH QC result is above the upper tolerance performance of this service QFL QC result is below the lower tolerance Indicative data, theoretical holding time exceeded. The sample was not analysed for this analyte ***

Indicates that both * and ** apply. NVI Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- 1 Bq is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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11-May-2021 Page 7 of 7



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Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 Phone: +61 2 4968 8448 NATA # 1261 Site # 25079

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

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

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

Company Name:

El Australia

Address:

Suite 6.01, 55 Miller Street

Pyrmont

NSW 2009

Project Name:

Project ID:

E25077

Order No.:

Report #: Phone:

793536 02 9516 0722

Fax:

Per-

and Polyfluoroalkyl Substances (PFASs)

Χ

Received: May 7, 2021 9:30 AM Due: May 14, 2021

Priority: 5 Day

Contact Name: Andrew Ibrahim

Eurofins Analytical Services Manager: Elvis Dsouza

New Zealand

Sample Detail

Melbourne Laboratory - NATA Site # 1254 & 14271 Sydney Laboratory - NATA Site # 18217 Brisbane Laboratory - NATA Site # 20794

Perth Laboratory - NATA Site # 23736

Mayfield Laboratory - NATA Site # 25079

External Laboratory

External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	GW-82- BH102M-1	Apr 30, 2021		Water	B21-My14281	х	
2	GW-EI-MW01-	Apr 30, 2021		Water	B21-My14282	х	
3	GW-EI-MW03-	Apr 30, 2021		Water	B21-My14283	Х	
4	GW-30- BH102M-1	Apr 30, 2021		Water	B21-My14284	х	
5	GW-30- BH106M-1	Apr 30, 2021		Water	B21-My14285	Х	
6	GW-30-	Apr 30, 2021		Water	B21-My14286	Х	



Australia

Melbourne 6 Monterey Road Dandenong South VIC 3175 16 Mars Road Phone: +61 3 8564 5000 NATA # 1261

Site # 1254 & 14271

Sydney Unit F3, Building F Lane Cove West NSW 2066 Phone: +61 7 3902 4600 Phone: +61 2 9900 8400 NATA # 1261 Site # 18217

Brisbane Perth 1/21 Smallwood Place 46-48 Banksia Road Welshpool WA 6106 Murarrie QLD 4172 Phone: +61 8 9251 9600 NATA # 1261 Site # 20794 NATA # 1261 Site # 23736

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New Zealand

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02 9516 0722

Received: May 7, 2021 9:30 AM

Due: May 14, 2021 **Priority:** 5 Day

Contact Name: Andrew Ibrahim

Eurofins Analytical Services Manager: Elvis Dsouza

Sample Detail								
Melb	ourne Laborato	ry - NATA Site	# 1254 & 142	71				
Sydn	ey Laboratory	NATA Site # 1	8217					
Brisk	oane Laboratory	/ - NATA Site #	20794			Х		
Perth	Laboratory - N	IATA Site # 237	36					
Mayf	ield Laboratory	- NATA Site #	25079					
Exte	rnal Laboratory							
	BH110M-1							
7	GW-30- BH111M-1	Apr 30, 2021		Water	B21-My14287	х		
8 GW-30- BH104M-1 Apr 30, 2021 Water B21-My14288								
9 GW-30- BH113M-1 Apr 30, 2021 Water B21-My14289								
Test Counts								



Australia

Melbourne 6 Monterey Road Dandenong South VIC 3175 16 Mars Road Phone: +61 3 8564 5000 NATA # 1261

Site # 1254 & 14271

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Per-

and Polyfluoroalkyl Substances (PFASs)

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Received: May 7, 2021 9:30 AM Due: May 14, 2021

Priority: 5 Day

Contact Name: Andrew Ibrahim

Eurofins Analytical Services Manager: Elvis Dsouza

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Sample Detail

Melbourne Laboratory - NATA Site # 1254 & 14271 Sydney Laboratory - NATA Site # 18217 Brisbane Laboratory - NATA Site # 20794

Perth Laboratory - NATA Site # 23736

Mayfield Laboratory - NATA Site # 25079

External Laboratory

External Laboratory							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	GW-82- BH102M-1	Apr 30, 2021		Water	B21-My14281	х	
2	GW-EI-MW01-	Apr 30, 2021		Water	B21-My14282	х	
3	GW-EI-MW03-	Apr 30, 2021		Water	B21-My14283	Х	
4	GW-30- BH102M-1	Apr 30, 2021		Water	B21-My14284	х	
5	GW-30- BH106M-1	Apr 30, 2021		Water	B21-My14285	Х	
6	GW-30-	Apr 30, 2021		Water	B21-My14286	Х	



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Project Name:

Project ID: E25077 Order No.: Report #:

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02 9516 0722

Received: May 7, 2021 9:30 AM

Due: May 14, 2021 **Priority:** 5 Day

Contact Name: Andrew Ibrahim

Eurofins Analytical Services Manager: Elvis Dsouza

Sample Detail								
Melb	ourne Laborato	ry - NATA Site	# 1254 & 142	71				
Sydn	ey Laboratory	NATA Site # 1	8217					
Brisk	oane Laboratory	/ - NATA Site #	20794			Х		
Perth	Laboratory - N	IATA Site # 237	36					
Mayf	ield Laboratory	- NATA Site #	25079					
Exte	rnal Laboratory							
	BH110M-1							
7	GW-30- BH111M-1	Apr 30, 2021		Water	B21-My14287	х		
8 GW-30- BH104M-1 Apr 30, 2021 Water B21-My14288								
9 GW-30- BH113M-1 Apr 30, 2021 Water B21-My14289								
Test Counts								



El Australia Suite 6.01, 55 Miller Street Pyrmont NSW 2009





NATA Accredited Accreditation Number 1261 Site Number 20794

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 and proficiency testing scheme providers reports.

Attention: Andrew Ibrahim

Report 793536-W

Project name

Project ID E25077
Received Date May 07, 2021

Client Sample ID			GW-82- BH102M-1	GW-EI-MW01-1	GW-EI-MW03-1	GW-30- BH102M-1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			B21-My14281	B21-My14282	B21-My14283	B21-My14284
Date Sampled			Apr 30, 2021	Apr 30, 2021	Apr 30, 2021	Apr 30, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	0.06	0.06	0.10	^{G10} < 0.08
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.02
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)N15	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	102	95	115	102
13C5-PFPeA (surr.)	1	%	83	97	105	79
13C5-PFHxA (surr.)	1	%	87	105	108	102
13C4-PFHpA (surr.)	1	%	150	171	173	93
13C8-PFOA (surr.)	1	%	138	144	143	104
13C5-PFNA (surr.)	1	%	141	126	131	173
13C6-PFDA (surr.)	1	%	134	129	111	116
13C2-PFUnDA (surr.)	1	%	109	103	94	156
13C2-PFDoDA (surr.)	1	%	112	91	88	172
13C2-PFTeDA (surr.)	1	%	62	37	42	INT
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)N11	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	96	98	84	INT
D3-N-MeFOSA (surr.)	1	%	86	90	86	INT

Report Number: 793536-W



Client Sample ID			GW-82- BH102M-1	GW-EI-MW01-1	GW-EI-MW03-1	GW-30- BH102M-1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			B21-My14281	B21-My14282	B21-My14283	B21-My14284
Date Sampled			Apr 30, 2021	Apr 30, 2021	Apr 30, 2021	Apr 30, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D5-N-EtFOSA (surr.)	1	%	171	184	171	INT
D7-N-MeFOSE (surr.)	1	%	69	72	65	INT
D9-N-EtFOSE (surr.)	1	%	67	71	64	199
D5-N-EtFOSAA (surr.)	1	%	19	36	40	82
D3-N-MeFOSAA (surr.)	1	%	22	36	42	82
Perfluoroalkyl sulfonic acids (PFSAs)	•	•				
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.02
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.01
Perfluoropentanesulfonic acid (PFPeS)N15	0.01	ug/L	< 0.01	< 0.01	< 0.01	^{N09} 0.01
Perfluorohexanesulfonic acid (PFHxS)N11	0.01	ug/L	< 0.01	< 0.01	< 0.01	^{N09} 0.07
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	N09< 0.01	< 0.01	< 0.01	^{N09} 0.13
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	146	141	136	110
18O2-PFHxS (surr.)	1	%	121	124	114	107
13C8-PFOS (surr.)	1	%	102	99	94	86
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	42	32	37	116
13C2-6:2 FTSA (surr.)	1	%	41	30	31	138
13C2-8:2 FTSA (surr.)	1	%	53	48	29	82
13C2-10:2 FTSA (surr.)	1	%	35	35	28	95
PFASs Summations		1				
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.2
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.13
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01	< 0.01	0.2
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.06	0.06	0.1	0.24
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1	0.1	0.26

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled			GW-30- BH106M-1 Water B21-My14285 Apr 30, 2021	GW-30- BH110M-1 Water B21-My14286 Apr 30, 2021	GW-30- BH111M-1 Water B21-My14287 Apr 30, 2021	GW-30- BH104M-1 Water B21-My14288 Apr 30, 2021
Test/Reference	LOR	Unit	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	G10< 0.08	^{G10} < 0.08	0.95	0.13
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	< 0.01	0.02	1.5	0.05
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	< 0.01	0.01	4.8	0.05
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	^{N09} 0.74	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01	N090.03	^{N09} 1.7	< 0.01



Client Sample ID			GW-30- BH106M-1	GW-30- BH110M-1	GW-30- BH111M-1	GW-30- BH104M-1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			B21-My14285	B21-My14286	B21-My14287	B21-My14288
Date Sampled			Apr 30, 2021	Apr 30, 2021	Apr 30, 2021	Apr 30, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)		4				
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	^{N09} 0.26	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	82	81	62	55
13C5-PFPeA (surr.)	1	%	68	72	108	43
13C5-PFHxA (surr.)	1	%	95	82	106	56
13C4-PFHpA (surr.)	1	%	83	86	99	74
13C8-PFOA (surr.)	1	%	104	92	43	92
13C5-PFNA (surr.)	1	%	170	155	89	156
13C6-PFDA (surr.)	1	%	92	84	45	99
13C2-PFUnDA (surr.)	1	%	120	116	87	126
13C2-PFDoDA (surr.)	1	%	142	97	121	154
13C2-PFTeDA (surr.)	1	%	158	77	135	171
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)N11	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	wg/L %	161	163	147	179
D3-N-MeFOSA (surr.)	1	%	180	92	138	140
D5-N-EtFOSA (surr.)	1	%	130	85	135	110
D7-N-MeFOSE (surr.)	1	%	131	85	115	INT
D9-N-EtFOSE (surr.)	1	%	88	80	74	121
D5-N-EtFOSAA (surr.)	1	%	93	138	147	124
D3-N-MeFOSAA (surr.)	1	%	85	106	129	103
Perfluoroalkyl sulfonic acids (PFSAs)	-	1				
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01	< 0.01	3.8	0.12
Perfluorononanesulfonic acid (PFNS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	0.02	< 0.01
Perfluoropropanesulfonic acid (PFPrS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	3.2	0.11
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01	N09< 0.01	N093.9	N090.03
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01	N090.02	N0928	N090.09
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	^{N09} 0.48	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01	^{N09} 0.02	N0929	N090.02
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	119	122	68	96
18O2-PFHxS (surr.)	1	%	95	93	67	89
13C8-PFOS (surr.)	1	%	82	75	75	81



Client Sample ID			GW-30- BH106M-1	GW-30- BH110M-1	GW-30- BH111M-1	GW-30- BH104M-1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			B21-My14285	B21-My14286	B21-My14287	B21-My14288
Date Sampled			Apr 30, 2021	Apr 30, 2021	Apr 30, 2021	Apr 30, 2021
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05	< 0.05	0.38	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	0.05	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	88	90	69	68
13C2-6:2 FTSA (surr.)	1	%	119	86	82	123
13C2-8:2 FTSA (surr.)	1	%	58	46	41	67
13C2-10:2 FTSA (surr.)	1	%	70	39	51	74
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	0.04	57	0.11
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	0.05	30.7	0.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	0.07	58.7	0.11
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.08	0.1	70.92	0.46
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	0.1	78.79	0.6

Client Sample ID Sample Matrix			GW-30- BH113M-1 Water
Eurofins Sample No.			B21-My14289
Date Sampled			Apr 30, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)	1		
Perfluorobutanoic acid (PFBA) ^{N11}	0.05	ug/L	0.09
Perfluoropentanoic acid (PFPeA) ^{N11}	0.01	ug/L	0.07
Perfluorohexanoic acid (PFHxA) ^{N11}	0.01	ug/L	0.03
Perfluoroheptanoic acid (PFHpA) ^{N11}	0.01	ug/L	< 0.01
Perfluorooctanoic acid (PFOA) ^{N11}	0.01	ug/L	< 0.01
Perfluorononanoic acid (PFNA) ^{N11}	0.01	ug/L	< 0.01
Perfluorodecanoic acid (PFDA) ^{N11}	0.01	ug/L	< 0.01
Perfluoroundecanoic acid (PFUnDA) ^{N11}	0.01	ug/L	< 0.01
Perfluorododecanoic acid (PFDoDA) ^{N11}	0.01	ug/L	< 0.01
Perfluorotridecanoic acid (PFTrDA) ^{N15}	0.01	ug/L	< 0.01
Perfluorotetradecanoic acid (PFTeDA) ^{N11}	0.01	ug/L	< 0.01
13C4-PFBA (surr.)	1	%	106
13C5-PFPeA (surr.)	1	%	71
13C5-PFHxA (surr.)	1	%	85
13C4-PFHpA (surr.)	1	%	76
13C8-PFOA (surr.)	1	%	91
13C5-PFNA (surr.)	1	%	160
13C6-PFDA (surr.)	1	%	89
13C2-PFUnDA (surr.)	1	%	119
13C2-PFDoDA (surr.)	1	%	132
13C2-PFTeDA (surr.)	1	%	159



Client Sample ID			GW-30- BH113M-1
Sample Matrix			Water
Eurofins Sample No.			B21-My14289
Date Sampled			Apr 30, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl sulfonamido substances			
Perfluorooctane sulfonamide (FOSA) ^{N11}	0.05	ug/L	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA) ^{N11}	0.05	ug/L	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA) ^{N11}	0.05	ug/L	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE) ^{N11}	0.05	ug/L	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE) ^{N11}	0.05	ug/L	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA) ^{N11}	0.05	ug/L	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA) ^{N11}	0.05	ug/L	< 0.05
13C8-FOSA (surr.)	1	%	121
D3-N-MeFOSA (surr.)	1	%	160
D5-N-EtFOSA (surr.)	1	%	167
D7-N-MeFOSE (surr.)	1	%	120
D9-N-EtFOSE (surr.)	1	%	98
D5-N-EtFOSAA (surr.)	1	%	65
D3-N-MeFOSAA (surr.)	1	%	65
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS) ^{N11}	0.01	ug/L	< 0.01
Perfluorononanesulfonic acid (PFNS)N15	0.01	ug/L	< 0.01
Perfluoropropanesulfonic acid (PFPrS)N15	0.01	ug/L	< 0.01
Perfluoropentanesulfonic acid (PFPeS) ^{N15}	0.01	ug/L	< 0.01
Perfluorohexanesulfonic acid (PFHxS) ^{N11}	0.01	ug/L	< 0.01
Perfluoroheptanesulfonic acid (PFHpS) ^{N15}	0.01	ug/L	< 0.01
Perfluorooctanesulfonic acid (PFOS) ^{N11}	0.01	ug/L	< 0.01
Perfluorodecanesulfonic acid (PFDS) ^{N15}	0.01	ug/L	< 0.01
13C3-PFBS (surr.)	1	%	100
18O2-PFHxS (surr.)	1	%	93
13C8-PFOS (surr.)	1	%	79
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA) ^{N11}	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA) ^{N11}	0.05	ug/L	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA) ^{N11}	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA) ^{N11}	0.01	ug/L	< 0.01
13C2-4:2 FTS (surr.)	1	%	89
13C2-6:2 FTSA (surr.)	1	%	125
13C2-8:2 FTSA (surr.)	1	%	59
13C2-10:2 FTSA (surr.)	1	%	55
PFASs Summations			
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.19
Sum of PFASs (n=30)*	0.1	ug/L	0.19



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
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	May 08, 2021	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	May 08, 2021	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	May 08, 2021	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	May 08, 2021	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

Report Number: 793536-W



Australia

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Perth 46-48 Banksia Road Welshpool WA 6106 Phone: +61 8 9251 9600 NATA # 1261 Site # 23736

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Address:

Suite 6.01, 55 Miller Street

Pvrmont

NSW 2009

Project Name:

Project ID:

E25077

Order No.:

Report #: Phone:

793536 02 9516 0722

Fax:

Per-

and Polyfluoroalkyl Substances (PFASs

Received: May 7, 2021 9:30 AM Due: May 14, 2021

Priority: 5 Day

Contact Name: Andrew Ibrahim

Eurofins Analytical Services Manager: Elvis Dsouza

New Zealand

Sample Detail

	۳
Melbourne Laboratory - NATA Site # 1254 & 14271	
Sydney Laboratory - NATA Site # 18217	
Brisbane Laboratory - NATA Site # 20794	Х
Perth Laboratory - NATA Site # 23736	

Mayfield Laboratory - NATA Site # 25079

Exte	rnal Laboratory					
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	
1	GW-82- BH102M-1	Apr 30, 2021		Water	B21-My14281	х
2	GW-EI-MW01- 1	Apr 30, 2021		Water	B21-My14282	х
3	GW-EI-MW03- 1	Apr 30, 2021		Water	B21-My14283	х
4	GW-30- BH102M-1	Apr 30, 2021		Water	B21-My14284	х
5	GW-30- BH106M-1	Apr 30, 2021		Water	B21-My14285	Х
6	GW-30-	Apr 30, 2021		Water	B21-My14286	Х



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 IANZ # 1290

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Company Name:

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Address:

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NSW 2009

Project Name:

Project ID:

E25077

Order No.: Report #:

793536

02 9516 0722

Phone: Fax:

Received: May 7, 2021 9:30 AM **Due:** May 14, 2021

May 14, 2021 5 Day

Contact Name: Andrew Ibrahim

Eurofins Analytical Services Manager: Elvis Dsouza

New Zealand

		Sa	mple Detail			Per- and Polyfluoroalkyl Substances (PFASs)	
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	71			
Sydr	ney Laboratory	- NATA Site # 1	8217				
Bris	pane Laboratory	y - NATA Site #	20794			Χ	
	n Laboratory - N						
May	ield Laboratory	- NATA Site #	25079				
Exte	rnal Laboratory		Г		Г		
	BH110M-1						
7	GW-30- BH111M-1	Apr 30, 2021		Water	B21-My14287	Х	
8	GW-30- BH104M-1	Apr 30, 2021		Water	B21-My14288	Х	
9	GW-30- BH113M-1	Apr 30, 2021		Water	B21-My14289	Х	
Test	Counts					9	



Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

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

Terms

Dry Where a moisture has been determined on a solid sample the result is expressed on a dry basis.

LOR Limit of Reporting

SPIKE Addition of the analyte to the sample and reported as percentage recovery.

RPD Relative Percent Difference between two Duplicate pieces of analysis.

LCS Laboratory Control Sample - reported as percent recovery.

CRM Certified Reference Material - reported as percent recovery.

Method Blank In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.

Surr - Surrogate The addition of a like compound to the analyte target and reported as percentage recovery.

Duplicate A second piece of analysis from the same sample and reported in the same units as the result to show comparison.

USEPA United States Environmental Protection Agency

APHA American Public Health Association
TCLP Toxicity Characteristic Leaching Procedure

COC Chain of Custody
SRA Sample Receipt Advice

QSM US Department of Defense Quality Systems Manual Version 5.3

CP Client Parent - QC was performed on samples pertaining to this report

NCP Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.

TEQ Toxic Equivalency Quotient

QC - Acceptance Criteria

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

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50% $\,$

Results >20 times the LOR : RPD must lie between 0-30%

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

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

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

QC Data General Comments

- 1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- 2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- 3. Organochlorine Pesticide analysis where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
- 4. Organochlorine Pesticide analysis where reporting Spike data, Toxaphene is not added to the Spike.
- 5. Total Recoverable Hydrocarbons where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
- 6. pH and Free Chlorine analysed in the laboratory Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time.

 Analysis will begin as soon as possible after sample receipt.
- 7. Recovery Data (Spikes & Surrogates) where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
- 8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
- 9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.

10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.



Quality Control Results

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank					
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05	0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01	0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01	0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01	0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01	0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01	0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01	0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01	0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01	0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01	0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01	0.01	Pass	
Method Blank	<u>~</u> g/	1 0.0.	, , , ,	1 450	
Perfluoroalkyl sulfonamido substances		T I			
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05	0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05	0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05	0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-	ug/L	< 0.03	0.03	Fass	
MeFOSE)	ug/L	< 0.05	0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05	0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05	0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05	0.05	Pass	
Method Blank			1 5755	1 5.55	
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01	0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01	0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01	0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01	0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01	0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01	0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01	0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)		< 0.01	0.01	Pass	
	ug/L	< 0.01	0.01	Pass	
Method Blank				T	
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	/1	0.04	0.01	D	
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01	0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05	0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01	0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01	0.01	Pass	
LCS - % Recovery		T		1	
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)	%	142	50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	122	50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	126	50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	115	50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	102	50-150	Pass	
Perfluorononanoic acid (PFNA)	%	118	50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	119	50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	132	50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	143	50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	97	50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	131	50-150	Pass	



Test			Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonamido substa	nces						
Perfluorooctane sulfonamide (FOSA	۸)		%	125	50-150	Pass	
N-methylperfluoro-1-octane sulfonar	mide (N-MeFOSA)		%	132	50-150	Pass	
N-ethylperfluoro-1-octane sulfonami	de (N-EtFOSA)		%	116	50-150	Pass	
2-(N-methylperfluoro-1-octane sulfor MeFOSE)	t-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N- MeFOSE)			113	50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfona	ımido)-ethanol (N-E	tFOSE)	%	137	50-150	Pass	
N-ethyl-perfluorooctanesulfonamido	acetic acid (N-EtFC	OSAA)	%	102	50-150	Pass	
N-methyl-perfluorooctanesulfonamic	loacetic acid (N-Me	FOSAA)	%	120	50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFS	As)						
Perfluorobutanesulfonic acid (PFBS))		%	103	50-150	Pass	
Perfluorononanesulfonic acid (PFNS	5)		%	110	50-150	Pass	
Perfluoropropanesulfonic acid (PFP)	rS)		%	121	50-150	Pass	
Perfluoropentanesulfonic acid (PFPe	eS)		%	106	50-150	Pass	
Perfluorohexanesulfonic acid (PFHx	S)		%	116	50-150	Pass	
Perfluoroheptanesulfonic acid (PFH)	oS)		%	86	50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)		%	117	50-150	Pass	
Perfluorodecanesulfonic acid (PFDS	5)		%	80	50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (r	n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfor	nic acid (4:2 FTSA)		%	118	50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfon	ic acid (6:2 FTSA)		%	111	50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfor	nic acid (8:2 FTSA)		%	108	50-150	Pass	
1H.1H.2H.2H-perfluorododecanesul	fonic acid (10:2 FT	SA)	%	125	50-150	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery					 		
Perfluoroalkyl carboxylic acids (Pf	CAs)			Result 1			
Perfluorobutanoic acid (PFBA)	B21-My14283	CP	%	60	50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B21-My14283	CP	%	106	50-150	Pass	
Perfluorohexanoic acid (PFHxA)	B21-My14283	CP	%	115	50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-My14283	CP	%	100	50-150	Pass	
Perfluorooctanoic acid (PFOA)	B21-My14283	CP	%	87	50-150	Pass	
Perfluorononanoic acid (PFNA)	B21-My14283	CP	%	109	50-150	Pass	
Perfluorodecanoic acid (PFDA)	B21-My14283	CP	%	98	50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-My14283	СР	%	125	50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-My14283	СР	%	115	50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-My14283	CP	%	77	50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-My14283	СР	%	113	50-150	Pass	
Spike - % Recovery							
Perfluoroalkyl sulfonamido substa	nces			Result 1			
Perfluorooctane sulfonamide (FOSA)	B21-My14283	СР	%	104	50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B21-My14283	СР	%	79	50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-My14283	СР	%	54	50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-My14283	СР	%	86	50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-My14283	СР	%	80	50-150	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl- perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-My14283	СР	%	101	50-150	Pass	
N-methyl- perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-My14283	СР	%	105	50-150	Pass	
Spike - % Recovery							
Perfluoroalkyl sulfonic acids (PFS	As)			Result 1			
Perfluorobutanesulfonic acid (PFBS)	B21-My14283	СР	%	84	50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-My14283	СР	%	91	50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-My14283	СР	%	103	50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-My14283	СР	%	113	50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-My14283	СР	%	93	50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-My14283	СР	%	78	50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-My14283	СР	%	99	50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-My14283	СР	%	79	50-150	Pass	
Spike - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			Result 1			
1H.1H.2H.2H- perfluorohexanesulfonic acid (4:2 FTSA)	B21-My14283	СР	%	103	50-150	Pass	
1H.1H.2H.2H-			,,,	199			
perfluorooctanesulfonic acid (6:2 FTSA)	B21-My14283	СР	%	101	50-150	Pass	
1H.1H.2H.2H- perfluorodecanesulfonic acid (8:2 FTSA)	B21-My14283	СР	%	102	50-150	Pass	
1H.1H.2H.2H- perfluorododecanesulfonic acid (10:2 FTSA)	D04 M-44000	СР	%	400	50.450	Dana	
Spike - % Recovery	B21-My14283	L CP	70	108	50-150	Pass	
Perfluoroalkyl carboxylic acids (Pl	ECAs)			Result 1			
Perfluorobutanoic acid (PFBA)	B21-My14286	СР	%	111	50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B21-My14286	CP	%	107	50-150	Pass	
Perfluorohexanoic acid (PFHxA)	B21-My14286	CP	%	121	50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-My14286	CP	%	103	50-150	Pass	
Perfluorooctanoic acid (PFOA)	B21-My14286	СР	%	111	50-150	Pass	
Perfluorononanoic acid (PFNA)	B21-My14286	СР	%	119	50-150	Pass	
Perfluorodecanoic acid (PFDA)	B21-My14286	СР	%	121	50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-My14286	СР	%	117	50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-My14286	СР	%	138	50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-My14286	CP	%	118	50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-My14286	СР	%	132	50-150	Pass	
Spike - % Recovery							
Perfluoroalkyl sulfonamido substa	nces	, , , , , , , , , , , , , , , , , , ,		Result 1			
Perfluorooctane sulfonamide (FOSA)	B21-My14286	СР	%	100	50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B21-My14286	СР	%	98	50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-My14286	СР	%	117	50-150	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-My14286	СР	%	76			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-My14286	СР	%	101			50-150	Pass	
N-ethyl- perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-My14286	СР	%	142			50-150	Pass	
N-methyl- perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-My14286	СР	%	118			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFS	As)			Result 1					
Perfluorobutanesulfonic acid (PFBS)	B21-My14286	СР	%	101			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-My14286	СР	%	119			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-My14286	СР	%	132			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-My14286	СР	%	122			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-My14286	СР	%	110			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-My14286	СР	%	112			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-My14286	СР	%	109			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-My14286	СР	%	77			50-150	Pass	
Spike - % Recovery				T	1				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	1		Result 1					
1H.1H.2H.2H- perfluorohexanesulfonic acid (4:2 FTSA)	B21-My14286	СР	%	139			50-150	Pass	
1H.1H.2H.2H- perfluorooctanesulfonic acid (6:2 FTSA)	B21-My14286	СР	%	137			50-150	Pass	
1H.1H.2H.2H- perfluorodecanesulfonic acid (8:2 FTSA)	B21-My14286	СР	%	137			50-150	Pass	
1H.1H.2H.2H- perfluorododecanesulfonic acid	,	-							
(10:2 FTSA)	B21-My14286	CP QA	%	138			50-150 Acceptance	Pass Pass	Qualifying
Test	Lab Sample ID	Source	Units	Result 1			Limits	Limits	Code
Duplicate									
Perfluoroalkyl carboxylic acids (PI	CAs)			Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B21-My14281	CP	ug/L	0.06	0.05	6.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B21-My14281	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B21-My14281	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-My14281	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B21-My14281	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B21-My14281	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B21-My14281	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-My14281	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Report Number: 793536-W



Duplicate				ı	1				
Perfluoroalkyl sulfonamido substa	nces		1	Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl- perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl- perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFS)	As)		1	Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (r	n:2 FTSAs)		1	Result 1	Result 2	RPD			
1H.1H.2H.2H- perfluorohexanesulfonic acid (4:2 FTSA)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H- perfluorooctanesulfonic acid (6:2 FTSA)	B21-My14281	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H- perfluorodecanesulfonic acid (8:2 FTSA)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H- perfluorododecanesulfonic acid (10:2 FTSA)	B21-My14281	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PF	CAs)			Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B21-My14282	CP	ug/L	0.06	0.06	2.0	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B21-My14282	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-My14282	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B21-My14282	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B21-My14282	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA) Perfluoroundecanoic acid	B21-My14282	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
(PFUnDA)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-My14282	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	



Duplicate									
				Door It 4	D 11 0	DDD			
Perfluoroalkyl sulfonamido substa Perfluorooctane sulfonamide	nces			Result 1	Result 2	RPD			
(FOSA) N-methylperfluoro-1-octane	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
sulfonamide (N-MeFOSA)	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl- perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl- perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate							ı		
Perfluoroalkyl sulfonic acids (PFS	As)			Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (r	n:2 FTSAs)			Result 1	Result 2	RPD			
1H.1H.2H.2H- perfluorohexanesulfonic acid (4:2 FTSA)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H- perfluorooctanesulfonic acid (6:2 FTSA)	B21-My14282	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H- perfluorodecanesulfonic acid (8:2 FTSA)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H- perfluorododecanesulfonic acid (10:2 FTSA)	B21-My14282	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (Pl	CAs)			Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B21-My14284	CP	ug/L	< 0.08	< 0.08	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B21-My14284	CP	ug/L	0.02	0.02	7.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-My14284	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B21-My14284	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B21-My14284	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B21-My14284	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-My14284	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	



Duplicate									
				Door It 4	D 11 0	DDD			
Perfluoroalkyl sulfonamido substa Perfluorooctane sulfonamide				Result 1	Result 2	RPD			
(FOSA) N-methylperfluoro-1-octane	B21-My14284	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
sulfonamide (N-MeFOSA)	B21-My14284	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-My14284	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-My14284	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-My14284	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl- perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-My14284	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl- perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-My14284	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate							ı		
Perfluoroalkyl sulfonic acids (PFS	As)		1	Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B21-My14284	СР	ug/L	0.02	0.02	4.0	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-My14284	СР	ug/L	0.01	0.01	23	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-My14284	СР	ug/L	0.01	0.01	20	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-My14284	СР	ug/L	0.07	0.07	1.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-My14284	СР	ug/L	0.13	0.13	2.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate	,								
n:2 Fluorotelomer sulfonic acids (ı	n:2 FTSAs)			Result 1	Result 2	RPD			
1H.1H.2H.2H-	,								
perfluorohexanesulfonic acid (4:2 FTSA)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H- perfluorooctanesulfonic acid (6:2 FTSA)	B21-My14284	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H- perfluorodecanesulfonic acid (8:2	D04 M 44004	0		0.04	0.04	,	000/		
FTSA) 1H.1H.2H.2H-	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
perfluorododecanesulfonic acid (10:2 FTSA)	B21-My14284	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (Pf	CAs)			Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B21-My14285	CP	ug/L	< 0.08	< 0.08	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-My14285	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B21-My14285	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B21-My14285	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B21-My14285	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	



Duplicate									
Perfluoroalkyl sulfonamido substa	inces			Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl- perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl- perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFS	As)			Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate				1	1				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			Result 1	Result 2	RPD			
1H.1H.2H.2H- perfluorohexanesulfonic acid (4:2 FTSA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H- perfluorooctanesulfonic acid (6:2 FTSA)	B21-My14285	СР	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H- perfluorodecanesulfonic acid (8:2 FTSA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H- perfluorododecanesulfonic acid (10:2 FTSA)	B21-My14285	СР	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Report Number: 793536-W



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

G10 The LOR has been raised due to suspected contamination

N09 Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.

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.

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). N15

Authorised by:

Elvis Dsouza Analytical Services Manager Sarah McCallion Senior Analyst-PFAS (QLD)

Glenn Jackson **General Manager**

Final Report - this report replaces any previously issued Report

- Indicates Not Requested
- Indicates NATA accreditation does not cover the performance of this service

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

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CERTIFICATE OF ANALYSIS 267639

Client Details	
Client	El Australia
Attention	Andrew Ibrahim
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details	
Your Reference	<u>E25077</u>
Number of Samples	4 soil
Date samples received	23/04/2021
Date completed instructions received	26/04/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details	
Date results requested by	03/05/2021
Date of Issue	03/05/2021
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Results Approved By

Dragana Tomas, Senior Chemist Giovanni Agosti, Group Technical Manager Manju Dewendrage, Chemist Steven Luong, Organics Supervisor Authorised By

Nancy Zhang, Laboratory Manager



vTRH(C6-C10)/BTEXN in Soil			
Our Reference		267639-1	267639-2
Your Reference	UNITS	QT1	QT2
Date Sampled		20/04/2021	22/04/2021
Type of sample		soil	soil
Date extracted	-	28/04/2021	28/04/2021
Date analysed	-	29/04/2021	29/04/2021
TRH C ₆ - C ₉	mg/kg	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<3	<3
Surrogate aaa-Trifluorotoluene	%	110	118

svTRH (C10-C40) in Soil			
Our Reference		267639-1	267639-2
Your Reference	UNITS	QT1	QT2
Date Sampled		20/04/2021	22/04/2021
Type of sample		soil	soil
Date extracted	-	28/04/2021	28/04/2021
Date analysed	-	29/04/2021	29/04/2021
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	105	99

PAHs in Soil			
Our Reference		267639-1	267639-2
Your Reference	UNITS	QT1	QT2
Date Sampled		20/04/2021	22/04/2021
Type of sample		soil	soil
Date extracted	-	28/04/2021	28/04/2021
Date analysed	-	28/04/2021	28/04/2021
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1
Pyrene	mg/kg	0.3	<0.1
Benzo(a)anthracene	mg/kg	0.2	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.2	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1
Total +ve PAH's	mg/kg	1.6	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	124	122

Envirolab Reference: 267639

Revision No: R00

Acid Extractable metals in soil			
Our Reference		267639-1	267639-2
Your Reference	UNITS	QT1	QT2
Date Sampled		20/04/2021	22/04/2021
Type of sample		soil	soil
Date prepared	-	30/04/2021	30/04/2021
Date analysed	-	30/04/2021	30/04/2021
Arsenic	mg/kg	<4	5
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	18	13
Copper	mg/kg	29	21
Lead	mg/kg	38	66
Mercury	mg/kg	0.1	0.2
Nickel	mg/kg	7	10
Zinc	mg/kg	45	59

Moisture			
Our Reference		267639-1	267639-2
Your Reference	UNITS	QT1	QT2
Date Sampled		20/04/2021	22/04/2021
Type of sample		soil	soil
Date prepared	-	28/04/2021	28/04/2021
Date analysed	-	29/04/2021	29/04/2021
Moisture	%	12	16

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
	F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
	Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <pql "total="" 'eq="" +ve="" 2.="" 3.="" <pql="" a="" above.="" actually="" all="" and="" approach="" approaches="" are="" as="" assuming="" at="" be="" below="" between="" but="" calculation="" can="" conservative="" contribute="" contributing="" false="" give="" given="" half="" hence="" individual="" is="" least="" lowest="" may="" mid-point="" more="" most="" negative="" not="" note,="" of="" pahs="" pahs"="" pahs.<="" positive="" pql="" pql'values="" pql.="" present="" present.="" reflective="" reported="" simply="" stipulated="" sum="" susceptible="" teq="" teqs="" th="" that="" the="" therefore="" this="" to="" total="" when="" zero'values="" zero.=""></pql>
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Envirolab Reference: 267639

Revision No: R00

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

Envirolab Reference: 267639 Page | 8 of 14

Revision No: R00

QUALITY CONT	QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate Spike Reco			covery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			28/04/2021	[NT]		[NT]	[NT]	28/04/2021	
Date analysed	-			29/04/2021	[NT]		[NT]	[NT]	29/04/2021	
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	[NT]		[NT]	[NT]	111	
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	[NT]		[NT]	[NT]	111	
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]		[NT]	[NT]	100	
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]		[NT]	[NT]	104	
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]		[NT]	[NT]	114	
m+p-xylene	mg/kg	2	Org-023	<2	[NT]		[NT]	[NT]	119	
o-Xylene	mg/kg	1	Org-023	<1	[NT]		[NT]	[NT]	115	
naphthalene	mg/kg	1	Org-023	<1	[NT]		[NT]	[NT]	[NT]	
Surrogate aaa-Trifluorotoluene	%		Org-023	112	[NT]		[NT]	[NT]	101	

QUALITY CO	QUALITY CONTROL: svTRH (C10-C40) in Soil						plicate		Spike Re	covery %
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			28/04/2021	[NT]		[NT]	[NT]	28/04/2021	
Date analysed	-			28/04/2021	[NT]		[NT]	[NT]	28/04/2021	
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	[NT]		[NT]	[NT]	118	
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	[NT]		[NT]	[NT]	107	
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	[NT]		[NT]	[NT]	123	
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	[NT]		[NT]	[NT]	118	
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	[NT]		[NT]	[NT]	107	
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	[NT]		[NT]	[NT]	123	
Surrogate o-Terphenyl	%		Org-020	103	[NT]		[NT]	[NT]	131	

QUA	QUALITY CONTROL: PAHs in Soil					Du	Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]		
Date extracted	-			28/04/2021	[NT]		[NT]	[NT]	28/04/2021			
Date analysed	-			28/04/2021	[NT]		[NT]	[NT]	28/04/2021			
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	94			
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	[NT]			
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	81			
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	88			
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	103			
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	[NT]			
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	89			
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	93			
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	[NT]			
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	69			
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]		[NT]	[NT]	[NT]			
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]		[NT]	[NT]	88			
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	[NT]			
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	[NT]			
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]		[NT]	[NT]	[NT]			
Surrogate p-Terphenyl-d14	%		Org-022/025	116	[NT]		[NT]	[NT]	126			

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			30/04/2021	[NT]		[NT]	[NT]	30/04/2021	
Date analysed	-			30/04/2021	[NT]		[NT]	[NT]	30/04/2021	
Arsenic	mg/kg	4	Metals-020	<4	[NT]		[NT]	[NT]	101	
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]		[NT]	[NT]	102	
Chromium	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	108	
Copper	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	105	
Lead	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	101	
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]		[NT]	[NT]	119	
Nickel	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	104	
Zinc	mg/kg	1	Metals-020	<1	[NT]		[NT]	[NT]	101	

Client Reference: E25077

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 267639

Revision No: R00

Client Reference: E25077

Quality Control	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Reference: 267639 Page | 14 of 14 Revision No: R00



Envirolab Services Pty Ltd

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CERTIFICATE OF ANALYSIS 268247

Client Details	
Client	El Australia
Attention	Lab Email
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details	
Your Reference	E25077, Melrose Park
Number of Samples	1 Water
Date samples received	04/05/2021
Date completed instructions received	04/05/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details	
Date results requested by	11/05/2021
Date of Issue	11/05/2021
NATA Accreditation Number 290	. This document shall not be reproduced except in full.
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Results Approved By

Dragana Tomas, Senior Chemist Giovanni Agosti, Group Technical Manager **Authorised By**

Nancy Zhang, Laboratory Manager



vTRH(C6-C10)/BTEXN in Water		
Our Reference		268247-1
Your Reference	UNITS	GW-QT1
Date Sampled		30/04/2021
Type of sample		Water
Date extracted	-	10/05/2021
Date analysed	-	10/05/2021
TRH C ₆ - C ₉	μg/L	<10
TRH C ₆ - C ₁₀	μg/L	<10
TRH C ₆ - C ₁₀ less BTEX (F1)	μg/L	<10
Benzene	μg/L	<1
Toluene	μg/L	<1
Ethylbenzene	μg/L	<1
m+p-xylene	μg/L	<2
o-xylene	μg/L	<1
Naphthalene	μg/L	<1
Surrogate Dibromofluoromethane	%	107
Surrogate toluene-d8	%	127
Surrogate 4-BFB	%	116

svTRH (C10-C40) in Water		
Our Reference		268247-1
Your Reference	UNITS	GW-QT1
Date Sampled		30/04/2021
Type of sample		Water
Date extracted	-	05/05/2021
Date analysed	-	06/05/2021
TRH C ₁₀ - C ₁₄	μg/L	<50
TRH C ₁₅ - C ₂₈	μg/L	<100
TRH C ₂₉ - C ₃₆	μg/L	<100
TRH >C ₁₀ - C ₁₆	μg/L	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	μg/L	<50
TRH >C ₁₆ - C ₃₄	μg/L	<100
TRH >C ₃₄ - C ₄₀	μg/L	<100
Surrogate o-Terphenyl	%	87

HM in water - dissolved		
Our Reference		268247-1
Your Reference	UNITS	GW-QT1
Date Sampled		30/04/2021
Type of sample		Water
Date prepared	-	05/05/2021
Date analysed	-	05/05/2021
Arsenic-Dissolved	μg/L	2
Cadmium-Dissolved	μg/L	<0.1
Chromium-Dissolved	μg/L	2
Copper-Dissolved	μg/L	1
Lead-Dissolved	μg/L	<1
Mercury-Dissolved	μg/L	<0.05
Nickel-Dissolved	μg/L	5
Zinc-Dissolved	μg/L	720

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Envirolab Reference: 268247 Page | 5 of 10

QUALITY CONT	Duplicate Spike Recove					overy %				
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			10/05/2021	[NT]		[NT]	[NT]	10/05/2021	
Date analysed	-			10/05/2021	[NT]		[NT]	[NT]	10/05/2021	
TRH C ₆ - C ₉	μg/L	10	Org-023	<10	[NT]		[NT]	[NT]	89	
TRH C ₆ - C ₁₀	μg/L	10	Org-023	<10	[NT]		[NT]	[NT]	89	
Benzene	μg/L	1	Org-023	<1	[NT]		[NT]	[NT]	94	
Toluene	μg/L	1	Org-023	<1	[NT]		[NT]	[NT]	75	
Ethylbenzene	μg/L	1	Org-023	<1	[NT]		[NT]	[NT]	90	
m+p-xylene	μg/L	2	Org-023	<2	[NT]		[NT]	[NT]	94	
o-xylene	μg/L	1	Org-023	<1	[NT]		[NT]	[NT]	87	
Naphthalene	μg/L	1	Org-023	<1	[NT]		[NT]	[NT]	[NT]	
Surrogate Dibromofluoromethane	%		Org-023	107	[NT]		[NT]	[NT]	108	
Surrogate toluene-d8	%		Org-023	109	[NT]		[NT]	[NT]	102	
Surrogate 4-BFB	%		Org-023	112	[NT]		[NT]	[NT]	107	

QUALITY CON		Duplicate			Spike Recovery %					
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	268247-1
Date extracted	-			04/05/2021	1	05/05/2021	05/05/2021		05/05/2021	05/05/2021
Date analysed	-			05/05/2021	1	06/05/2021	06/05/2021		06/05/2021	06/05/2021
TRH C ₁₀ - C ₁₄	μg/L	50	Org-020	<50	1	<50	<50	0	93	98
TRH C ₁₅ - C ₂₈	μg/L	100	Org-020	<100	1	<100	<100	0	77	86
TRH C ₂₉ - C ₃₆	μg/L	100	Org-020	<100	1	<100	<100	0	108	86
TRH >C ₁₀ - C ₁₆	μg/L	50	Org-020	<50	1	<50	<50	0	93	98
TRH >C ₁₆ - C ₃₄	μg/L	100	Org-020	<100	1	<100	<100	0	77	86
TRH >C ₃₄ - C ₄₀	μg/L	100	Org-020	<100	1	<100	<100	0	108	86
Surrogate o-Terphenyl	%		Org-020	85	1	87	118	30	102	107

QUALITY CONTROL: HM in water - dissolved							Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]	
Date prepared	-			05/05/2021	[NT]		[NT]	[NT]	05/05/2021		
Date analysed	-			05/05/2021	[NT]		[NT]	[NT]	05/05/2021		
Arsenic-Dissolved	μg/L	1	Metals-022	<1	[NT]		[NT]	[NT]	98		
Cadmium-Dissolved	μg/L	0.1	Metals-022	<0.1	[NT]		[NT]	[NT]	101		
Chromium-Dissolved	μg/L	1	Metals-022	<1	[NT]		[NT]	[NT]	98		
Copper-Dissolved	μg/L	1	Metals-022	<1	[NT]		[NT]	[NT]	97		
Lead-Dissolved	μg/L	1	Metals-022	<1	[NT]		[NT]	[NT]	97		
Mercury-Dissolved	μg/L	0.05	Metals-021	<0.05	[NT]		[NT]	[NT]	106		
Nickel-Dissolved	μg/L	1	Metals-022	<1	[NT]		[NT]	[NT]	97		
Zinc-Dissolved	μg/L	1	Metals-022	<1	[NT]		[NT]	[NT]	98		

Result Definiti	ons
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Envirolab Reference: 268247

Revision No: R00

Quality Control	ol Definitions
Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

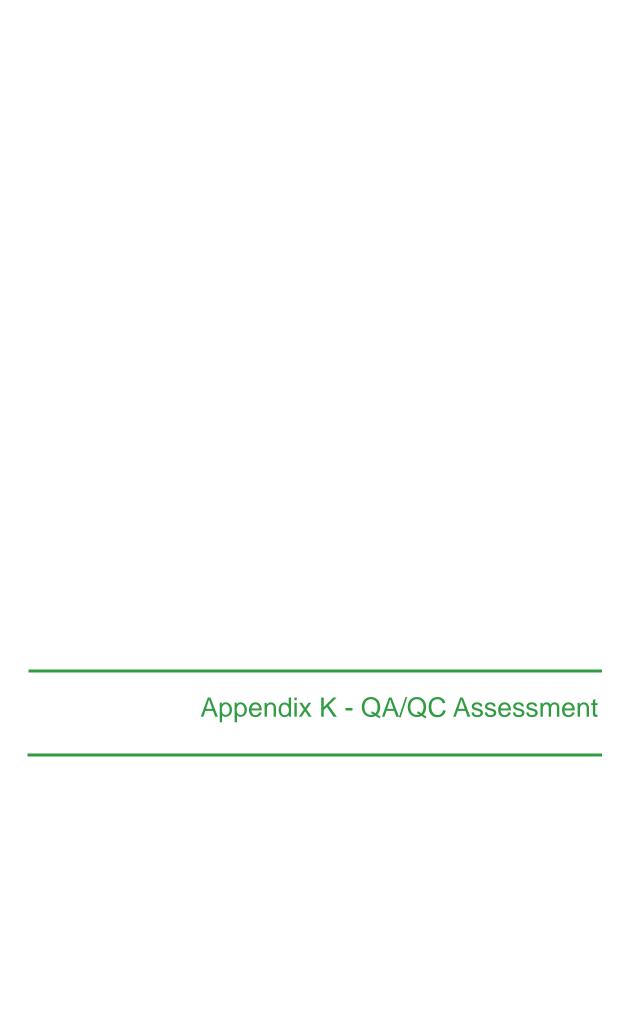
When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.



K.1 Site location

K.1.1 Introduction

For the purpose of assessing the quality of data presented in this Contaminant Delineation Report, EI collected field QC samples for analysis. The primary laboratory, SGS Australia Pty Ltd (SGS) and secondary laboratory, Envirolab Services Pty Ltd (Envirolab) also prepared and analysed internal QC samples. Details of the field and laboratory QC samples, with the allowable data acceptance ranges are presented in **Table M-1**.

Table K.1 Sampling Data Quality Indicators

QA/QC Measures	Data Quality Indicators						
Precision – A quantitative measure of the variability (or reproducibility) of data	Data precision would be assessed by reviewing the performance of blind field duplicate sample sets, through calculation of relative percentage differences (RPD). Data precision would be deemed acceptable if RPDs are found to be less than 30%. RPDs that exceed this range may be considered acceptable where:						
	Results are less than 10 times the limits of reporting (LOR);						
	 Results are less than 20 times the LOR and the RPD is less than 50%; or 						
	 Heterogeneous materials or volatile compounds are encountered. 						
Accuracy – A quantitative	Data accuracy would be assessed through the analysis of:						
measure of the closeness of reported data to the "true"	 Method blanks, which are analysed for the analytes targeted in the primary samples; 						
value	 Matrix spike and matrix spike duplicate sample sets; 						
	Laboratory control samples; and						
	Calibration of instruments against known standards.						
Representativeness – The confidence (expressed qualitatively) that data are	To ensure the data produced by the laboratory is representative of conditions encountered in the field, the laboratory would carry out the following:						
representative of each medium present onsite	 Blank samples will be run in parallel with field samples to confirm there are no unacceptable instances of laboratory artefacts; 						
	 Review of relative percentage differences (RPD) values for field and laboratory duplicates to provide an indication that the samples are generally homogeneous, with no unacceptable instances of significant sample matrix heterogeneities; and 						
	The appropriateness of collection methodologies, handling, storage and preservation techniques will be assessed to ensure/confirm there was minimal opportunity for sample interference or degradation (i.e. volatile loss during transport due to incorrect preservation / transport methods).						
Completeness – A measure of the amount of useable data	Analytical data sets acquired during the assessment will be evaluated as complete, upon confirmation that:						
from a data collection activity	 Standard operating procedures (SOPs) for sampling protocols were adhered to; and 						
	 Copies of all COC documentation are presented, reviewed and found to be properly completed. 						
	It can therefore be considered whether the proportion of "useable data" generated in the data collection activities is sufficient for the purposes of the land use assessment.						
Comparability – The confidence (expressed	Given that a reported data set can comprise several data sets from separate sampling episodes, issues of comparability between data sets are						



QA/QC Measures	Data Quality Indicators
qualitatively) that data may be considered to be equivalent for each sampling and analytical event	reduced through adherence to SOPs and regulator-endorsed or published guidelines and standards on each data gathering activity. In addition the data will be collected by experienced samplers and NATA-accredited laboratory methodologies will be employed in all laboratory testing programs.

K.1.2 Calculation of Relative Percentage Difference (RPD)

The RPD values were calculated using the following equation:

$$RPD = \frac{|C_O - C_R|}{[(C_O + C_R)/2]} \times 100$$

Where:

 C_0 = Concentration obtained for the primary sample; and

C_R = Concentration obtained for the blind replicate or split duplicate sample.

K.2 Field QA/QC Data Evaluation

The field quality assurance/quality control (QA/QC) soil and groundwater samples collected during the investigations were as follows:

- Blind field duplicates;
- Inter-laboratory duplicates;
- Trip blanks;
- Trip spikes; and
- Rinsate blanks.

Analytical results for tested soil and groundwater QA/QC samples, including calculated RPD values between primary and duplicate samples, are presented in **Table M-2** and **Table M-3**, respectively.

K.2.1 Soil Investigation & Soil Validation

K.2.1.1 Blind Field Duplicates

Four blind field duplicate (BFD) soil sample were collected as follows:

- Sample QD1 was collected from the primary sample 82-BH102M_0.4-0.6 on 20 April 2021;
- Sample QD2 was collected from the primary sample 32-BH105_0.2-0.3 on 22 April 2021;
- Sample QD3 was collected from the primary sample 30-BH103 0.3-0.4 on 20 April 2021;
- Sample QD4 was collected from the primary sample 112-BH101_0.3-0.4 on 22 April 2021;

The preparation of the BFD samples involved the collection of a bulk quantity of soil from the same sampling point without mixing, before dividing the material into identical sampling vessels. The duplicate samples were then presented blind to the primary laboratory (SGS) to avoid any potential analytical bias. BFD soil samples were analysed for TRHs, BTEX and selected heavy



metals and calculated RPD values were found to be within the Data Acceptance Criteria (**Appendix K**, **Table K-2**), with the exception of arsenic, lead, nickel and zinc. These results were considered to reflect the non-homogenous nature of the fill material, which is a typical characteristic of disturbed fill soils in Sydney's older, urban-industrial precincts. Also some results are less than 10 times the limits of reporting (LOR).

K.2.1.2 Inter-Laboratory Duplicate

Two inter-laboratory duplicate (ILD) soil sample were collected as follows:

- Sample QT1 was collected from the primary sample 82-BH102M_0.4-0.6 on 20 April 2021;
- Sample QT2 was collected from the primary sample 32-BH105_0.2-0.3 on 22 April 2021;

The preparation of the ILD sample was identical to the BFD sample, as described above, and was analysed for TRHs, BTEX and selected heavy metals. The calculated RPD values were found to be within the Data Acceptance Criteria (**Appendix K**, **Table K-2**), with the exception of arsenic, chromium, copper, lead, nickel and zinc. These results were considered to reflect the non-homogenous nature of the fill material, which is a typical characteristic of disturbed fill soils in Sydney's older, urban-industrial precincts. Also some results are less than 10 times the limits of reporting (LOR).

Furthermore, soil samples were placed immediately into jars following sampling to reduce the loss of volatiles from samples. Analytical results indicated that the samples collected were representative of the soils present at respective sampling locations.

K.2.1.3 Trip Blank

One trip blank (TB) sample was prepared and analysed by the primary laboratory for BTEX and Naphthalene. Analytical results for this sample were below the laboratory LOR, indicating that ideal sample transport and handling conditions were achieved.

K.2.1.4 Trip Spike

One trip spike (TS) sample was submitted to the primary laboratory for BTEX analysis, the results for which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.

K.2.1.5 Rinsate Blank

One rinsate blank (RB) sample BH-QR1 was submitted to the primary laboratory for TRHs, BTEX and selected heavy metals analysis, the results for which were reported below laboratory LOR; therefore, it was concluded that decontamination procedures performed during the field works had been effective.

K.2.2 Groundwater Investigation

K.2.2.1 Blind Field Duplicates

One groundwater BFD samples were collected as follows:

The sample GW-QD1 was split a GW-30_BH110M-1 during fieldwork on 30 April 2021;

The preparation of BFD samples involved the decanting of the groundwater collected from the respective monitoring well into two separate groups of appropriately labelled sampling containers. Volumes were split equally between the groups of sampling bottles such that the sample contained in each individual bottle, contained a similar proportion of each water volume. Sample mixing did not occur prior to decanting, in order to preserve the concentrations of volatiles potentially present within the sample. The duplicate sample was then presented blind to the primary laboratory (SGS) to avoid any potential analytical bias. The BFDs were analysed for TRHs, BTEX and selected heavy metals. The RPD values (**Appendix K, Table K-3**)



calculated for all the analytes tested were found to be within the Data Acceptance Criteria (DAC) with the exception of copper, however, the data deemed accepted as the results are less than 10 times the limits of reporting (LOR).

K.2.2.2 Inter-Laboratory Duplicate

One ILD samples were collected in total, as follows:

The sample GW-QT1 was split a GW-30_BH110M-1 during fieldwork on 30 April 2021;

The preparation of a groundwater ILD sample was identical to the BFD sample as described above and also analysed for TRHs, BTEX and selected heavy metals. The RPD values calculated for the ILD samples were found to be within the Data Acceptance Criteria with the exception of copper and arsenic, however, the data deemed accepted as the results are less than 10 times the limits of reporting (LOR).

Overall data quality was considered to be acceptable, in accordance with the laboratory DQOs presented in **Appendix J, Table QC5**.

K.2.2.3 Trip Blanks

One trip blank (TB) sample, prepared by the primary laboratory, were analysed for BTEX by the primary laboratory during groundwater testing. TB results were reported below the laboratory LOR, indicating that ideal sample transport and handling conditions were achieved.

K.2.2.4 Trip Spikes

One TS samples was submitted to the primary laboratory for BTEX analysis, the results for which were all reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.

K.2.2.5 Rinsate Blanks

One RB samples (GW-QR1) was submitted to the primary laboratory for TRHs, BTEX and selected heavy metals analyses. Analytical results were reported below the laboratory LOR for all analytes. In view of this finding it was concluded that decontamination procedures performed during the field works had been effective.

K.2.3 Assessment of Field QA/QC Data

All samples were classified in the field with respect to soil/fill characteristics and any observable signs of contamination based on visual and odour assessment, in regards to soil and groundwater.

All samples, including field QC samples, were transported to the primary and secondary laboratories under strict Chain-of-Custody conditions and appropriate copies of relevant documentation were included in the respective reports.

The overall completeness of documentation produced under the field program of the subject assessment was considered to be adequate for the purposes of drawing valid conclusions regarding the environmental condition of the site.

Based on the results of the field QA/QC data EI considered the field QA/QC programme carried out during the investigation to be appropriate and the results to be acceptable.



K.3 LABORATORY QA/QC

Primary and intra-laboratory duplicate samples were analysed by SGS (located in Alexandria NSW), with the inter-laboratory duplicate sample analysed by Envirolab (located in Chatswood NSW). All laboratories are accredited by NATA for the analyses undertaken. A discussion of the laboratory DQIs is presented in **Table I-3** below.

Table I-3 Laboratory Data Quality Indicators

DQI	Item	Conformance
Completeness	All critical samples analysed according to SAQP and proposal	Yes
A measure of the amount of useable data (expressed	All analytes analysed according to SAQP in proposal	Yes
as %) from a data collection activity	Appropriate methods and PQLs	Yes
	Sample documentation complete	Yes
	Sample holding times complied with	Yes
Comparability	Sample analytical methods used (including clean-up)	Yes
The confidence (expressed qualitatively) that data may	Sample PQLs (justify/ quantify if different)	Yes
be considered to be equivalent for each	Same laboratories (justify/ quantify if different)	Yes
sampling and analytical event	Same units (justify/ quantify if different)	Yes
Representativeness Confidence that data are representative of each media	All key samples analysed according to SAQP in the proposal	Yes
Precision	Analysis of laboratory duplicates	Yes
A quantitative measure of the variability (or	Analysis of field duplicates	Yes
reproducibility) of data	Analysis of laboratory-prepared volatile trip spikes	Yes
Accuracy	Analysis of field blanks	Yes
A quantitative measure of the closeness of reported	Analysis of rinsate blanks	Yes
data to the true value	Analysis of method blanks	Yes
	Analysis of matrix spikes (MS)	Yes
	Analysis of matrix spike duplicates (MSD)	Yes
	Analysis of surrogate spikes	Yes
	Analysis of reference materials	Not applicable
	Analysis of laboratory control samples	Yes

Conclusions for the Laboratory QA/QC

All contracted laboratories (SGS and Envirolab) were accredited by NATA for the analyses undertaken. All analytical procedures used were industry recognised and endorsed standard methods. Appropriate QC measures were integrated into each testing batch and the DQI were met, or if not, the variability was suitably justified. All final reports were submitted in full and



included all requested analyses, as per the signed COC forms. El considered the laboratory QA/QC programs carried out during the investigation to be appropriate.

K.4 Summary of Project QA/QC

The sampling (including sample preservation, transport and decontamination procedures) and laboratory methods followed during this investigation were consistent with EI protocols. The project DQO specified in **Section 5.2**, **Table 5-1** were considered to have been achieved. The adopted QA/QC program ensured that the data collated during the DSI were accurate, precise and representative of the site condition. It was therefore considered that the data were sufficiently precise and accurate and that the results could be used for DSI interpretative purposes.



		TRH			BTEX				Heavy Metals								
Sample identification	Description	Ħ	F2	F3 (>C ₁₆ - C ₃₄)	F4 (>C ₃₄ - C ₄₀)	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
Intra-laboratory Duplicate - Soil Investigation																	
82-BH102M_0.4-0.6		<25	<25	<90	<120	<0.1	<0.1	<0.1	< 0.3	5	< 0.3	10	24	42	0.12	5.7	55
QD1	BFD of 82-BH102M_0.4-0.6	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	5	<0.3	8.9	28	54	0.1	5.2	66
	RPD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.64	15.38	25.00	18.18	9.17	18.18
, ,	licate - Soil Investigation																
82-BH102M_0.4-0.6		<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	5	< 0.3	10	24	42	0.12	5.7	55
QT1	BFD of 82-BH102M_0.4-0.6	<25	<50	<100	100	<0.2	<0.5	<1	<1	<4	<0.4	18	29	38	0.1	7	45
	RPD	0.00	NA	NA	18.18	NA	NA	NA	NA	22.22	NA	57.14	18.87	10.00	18.18	20.47	20.00
	licate - Soil Investigation	-	1	1				-				-	1			-	
32-BH105_0.2-0.3		<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	9	<0.3	27	42	220	0.18	20	150
QD2	BFD of 32-BH105_0.2-0.3	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	6	<0.3	17	37	82	0.14	15	84
	RPD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.00	0.00	45.45	12.66	91.39	25.00	28.57	56.41
, ,	licate - Soil Investigation		1	1									1				
32-BH105_0.2-0.3	Fill	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	9	<0.3	27	42	220	0.18	20	150
QT2	BFD of 32-BH105_0.2-0.3 RPD	<25	<50	<100	100	<0.2	<0.5	<1	<1	5	<0.4	13	21	66	0.2	10	59
latas labaratan Dan		0.00	NA	NA	18.18	NA	NA	NA	NA	57.14	NA	70.00	66.67	107.69	10.53	66.67	87.08
, ,	licate - Soil Investigation			1									1	1			
30-BH103_0.3-0.4 QD3	Fill	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	5	<0.3	2.4	5.7	19	<0.05	1	15
QD3	BFD of 30-BH103_0.3-0.4 RPD	<25 0.00	<25 0.00	<90 0.00	<120 0.00	<0.1 0.00	<0.1 0.00	<0.1 0.00	<0.3 0.00	5 0.00	<0.3 0.00	2.9 18.87	7.7 29.85	31 48.00	<0.05 0.00	1.4	24
Intro Johanntony Dun	licate - Soil Investigation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.87	29.85	48.00	0.00	33.33	46.15
112-BH101 0.3-0.4		<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	10	<0.3	12	37	16	<0.05	26	29
QD4	BFD of 112-BH101 0.3-0.4	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	2	<0.3	9.7	53	2	<0.05	53	34
QD4	RPD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	133.33	0.00	21.20	35.56	155.56	0.00	68.35	15.87
Rinsate Blanks																	
QR1	decon. Procedure water	<50	<60	<500	<500	< 0.5	< 0.5	<0.5	<1.5	<1	<0.1	<1	<1	<1	<0.1	<1	<5
Trip Blank										- 10							
QTB-1	Lab prepared					<0.1	<0.1	<0.1	< 0.3								
Trip Spike	Edib propurou					, O. 1	· · · · ·	,0.1	٠٥.٥								
QTS-1	Lab prepared		-	_		[109%]	[101%]	[95%]	[95%]				_				
2131	Lub propurcu		ı	l		[10770]	[10170]	[/0/0]	[/0/0]				l	l			

NOTE: All results are reported in mg/kg (soil) or µg/L (water)

NA	Different PQLs
66.67	RPD calculated by halving detection limit exceeds 30-50% range referenced from AS4482.1 (2005)
52.87	RPD exceeds 30-50% range referenced from AS4482.1 (2005)

	TRH				BTEX				Heavy Metals								
Sample identification	Description	F1	F2	F3 (>C ₁₆ - C ₃₄)	F4 (>C ₃₄ - C ₄₀)	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
Intra-laboratory Duplicate	Intra-laboratory Duplicate - GW Investigation - 1st GME																
GW-30_BH110M-1	GW	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	1	<0.1	2	6	<1	<0.1	6	580
GW-QD1	BFD of GW-30_BH110M-1	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	1	<0.1	2	2	<1	<0.1	5	540
RI	_	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	18.18	7.14
	e - GW Investigation - 1st (GME															
GW-30_BH110M-1	GW	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	1	<0.1	2	6	<1	<0.1	6	580
	BFD of GW-30_BH110M-1	<10	<50	<100	<100	<1	<1	<1	<3	2	<0.1	2	1	<1	<0.05	5	720
RI	=	NA	NA	NA	NA	NA	NA	NA	NA	66.67	0.00	0.00	142.86	0.00	NA	18.18	21.54
Rinsate Blanks - GW Inve	stigation - for 1st and 2nd	GME															
GW-QR1	Decon. procedure water	<50	<60	<500	<500	<0.5	<0.5	< 0.5	<1.5	<1	<0.1	<1	<1	<1	<0.1	<1	<5
Trip Blank - GW Investigation - for 1st and 2nd GME																	
GW-QTB1	Lab prepared	-	-	-	-	<0.5	<0.5	<0.5	<1.5	-	-	-	-	-	-	-	-
Trip Spike - GW Investiga	Trip Spike - GW Investigation - for 1st and 2nd GME																
GW-QTS1	Lab prepared	-	-	-	-	[100%]	[104%]	[103%]	[103.5%]	-	-	-	-	-	-	-	-

NOTE: All results are reported in or µg/L

NA	Different PQLs
66.67	RPD calculated by halving detection limit exceeds 30-50% range referenced from AS4482.1 (2005)
52.87	RPD exceeds 30-50% range referenced from AS4482.1 (2005)