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15th April 2021

Ref. In-Situ SCR Part of Block 2249 Jerrabomberra

Sch 2.2(a)(ii)

Senior Project Engineer

Lendlease

Dear

In-situ Categorisation Report – REV#01
Reuse Request – Block 2249 Jerrabomberra, ACT

1. Introduction

Agon Environmental was commissioned by Lendlease to prepare this in-situ soil categorisation report for up to 3,000m^3 (bulked) of in-situ fill soils (i.e. soils not meeting the definition of VENM) to be excavated to allow the construction of Defence facility at an area of HMAS Harman formerly used for residential accommodation.

At the time of this report, surficial soils and grasses have been grubbed (to a depth of 100mm) and stockpiled separately. A previous investigation was undertaken by Douglas Partners at the site area (refer **Section 2**) and was supplemented by an addition in-situ assessment undertaken by Agon to comply with ACT EPA (2019) Information Sheet 4.

The applicable in-situ assessment data has been compiled to determine the suitability of in-situ soils for offsite reuse as general fill at Mugga 2 Quarry at Block 2252 Jerrabomberra, a letter of acceptance from Remondis who operate the quarry on behalf on ACT NOWaste is included in **Attachment 1**. This reuse site is consistent with those permitted by IF4, that is, reuse is occurring within an industrial land use setting.

Compliance to IF4 is summarised below in **Table 1**, where appropriate the relevant section of the report has been referenced to provide further discussion.

Table 1: Compliance to Information Sheet 4

IF4 Item	Comment	Compliant
REUSE		
IWRG702	Soil Domains were allocated on basis of site history, geology type and a site inspection.	Yes
Sampling Rate	Sample rates were based on Domains, which were derived on the basis of similar soil typology, analyte concentrations and site derived feature.	Yes
SAMPLING AND ANALYSIS		
ASLP	ASLP considered and applied where appropriate.	Yes
Method	Sample method discussed in **Section 4**.	Yes
Laboratory Analysis	Analysis completed at NATA accredited laboratories, **Section 4**.	Yes
ASSESSMENT REPORT		
Site History	Refer **Section 2**. Previous reports available and reviewed.	Yes
Contaminants / Analytes	Adopted based on site history. Justification for analyte selection provided in **Section 4** and complies with IF4.	Yes
Sampling Locations	General grid-based sample locations adopted (refer **Section 4**) to assess the site.	Yes
Sample Rate	Analysis rate appropriate.	Yes
PFAS	PFAS compounds considered and assessed.	Yes
Analysis Results	Tabulated and summarised.	Yes
Laboratory Certificates	Available laboratory certificates provided **Attachment 3**.	Yes
Offsite Reuse	Letter of acceptance received; reuse location complies with IF4 requirements (i.e. industrial land use setting). **See Attachment 1.**	Yes

With reference to IF4, Agon have considered the following regulations and guidance documents in preparation of this report:

- ACT Environmental Protection Act 1997 and Environment Protection Regulation 2005.
- ACT EPA (2017), Contaminated Sites Environment Protection Policy (the CSEPP).
- Australian Government (2018) PFAS National Environmental Management Plan.
- ACT Government (2000), Environment ACT, ACT's Environmental Standards: Assessment & Classification of Liquid & Non-liquid wastes.
- EPA Victoria (2009) Industrial Waste Resource Guidelines (IWRG) 621 Soil Hazard Categorisation and Management.
- EPA Victoria (2009) IWRG701 Sampling and analysis of waters, wastewaters, soils and wastes.
- EPA Victoria (2009) IWRG702 Soil Sampling.
- The National Environmental Protection Measure (NEPM) (Assessment of Site Contamination) (1999, as amended 2013) (ASC NEPM 2013).

2. Site History and Contaminants of Concern

Site History

Agon were provided with a report titled:

- Douglas (2020) Report on Detailed Site Investigation for Contamination. Project Roger, Part Rural Block 2249 Jerrabomberra.

The DSI included the following scope of work:

- History of the site area is as follows:
  - 1952 to 1993 – Area developed exclusively for residential accommodation.
  - 1997 – Residential accommodation buildings were demolished.
  - 1997-2020 – No changes to site area.
- Douglas identified the following potential sources of contamination:
  - Fill – The source of the Fill is unknown.
  - Past and Present Hydrocarbon Storage.
  - Residual Hazardous Building Materials – Within the footprint of the former residential buildings.
  - Historical use of PFAS.
- Advancement of 19 boreholes (Bore 1 to Bore 19), subsurface conditions were logged as follows:
  - *TOPSOIL/TOPSOIL FILL: moist to dry silty clay with rootlets and various anthropogenic materials to depths of 0.1 – 0.3 m.*
  - *GRAVELLY/SILTY CLAY FILL: very stiff, moist to dry, medium plasticity gravelly clay fill in Bores 4, 8, 9 and 13 to depths of 0.15 – 0.6 m.*
  - *SILTY CLAY/CLAY: variably stiff to hard, moist to dry, low to high plasticity clay and silty clay to depths of 0.6 – 1.6m. It is noted that the majority of the basal depths of this strata were logged as extremely weathered dacite.*
  - *DACITE ROCK: initially very low to low strength, highly weathered, highly fractured dacite below depths of 0.9 – 2.0 m, becoming variably low to high strength with depth to the limit of investigation depths of 3.0 – 6.65 m.*
- Analysis of selected soil samples both in Fill and natural soils for the following contaminants:
  - 8 Metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn).
  - TRH / BTEXN.
  - PAH.
  - OCP / OPP.
  - PCBs.
  - Asbestos.
  - PFAS.
- Ultra-trace level detections of PFAS (0.0001 mg/kg) and Asbestos impacts were identified at the following locations:
  - PFAS:
    - Bore 1 - 0.1m
    - Bore 12 – 0.1m
    - Bore 19 - 0.1m
    - Bore 7 – 0.5m
  - Asbestos Fibres:
    - Bore 15 and Bore 2 - 0.1m

Revised Contaminants of Concern

On the basis of the Douglas (2020) DSI Agon have revised the contaminants of concern applicable to Fill at the site area:

- **8 Metals** (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn).
- **TRH / BTEXN**.
- **PAH** – The PAH analytical suite has been adopted to assess for a range of contaminants that may arise from partially combusted organic substances (i.e. ash), chemical additives or crude substances (tar, oils, creosote). PAHs are not usually found singularly but as a mixture of individual chemicals as such Benzo(a)pyrene has not been specifically as a contaminant of concern that would warrant specific analysis (i.e. ultra-trace), rather it is quantified as part of the broader PAH analytical screen.
- **OCP / OPP**.
- **PCBs**.
- **Asbestos** – Visual inspection for bonded cement materials or demolition wastes.

PFAS compounds have been excluded as applicable to the site area on the basis of the following lines of evidence:

- Defence have confirmed that there are no records of PFAS storage or use at HMAS Harman in correspondence with Lendlease.
- HMAS Harman was established as a Defence administrative support facility with no current or historical training activities that involve the use of PFAS (i.e. firefighting). As per Defence (2019) *PFAS Construction and Maintenance Framework Guidance for managing the risks of PFAS contamination for works on the Defence estate:*
    - **Key Messages (pg. II)** - Standard laboratory analysis LOR should be used. These are currently 0.005 mg/kg for soil and sediment, and 0.01 µg/L for water.
    - **Section 1.2.2** – HMAS Harman is not listed on the Defence PFAS Investigation and Management Program website or on the Defence Garrison Estate Management System (GEMS) as having PFAS contamination.
    - **Section 1.2.2** – The framework *does not apply to works occurring in an area on Base where there is no evidence of actual or likely presence of PFAS contamination*.
- Sch 2.2(a)(xi)
- In support of this opinion Agon undertook additional PFAS analysis of samples TP01-0.2, TP02-0.2, TP07-0.5 and TP04-0.5 which verify the absence of PFAS in Fill within the site area – Refer Table 1 **Attachment 1**.

3. Summary of Soil Domains

A description, volume/depth and Domain justification is provided below in **Table 2**.

Table 2: Soil Categorisation Domains

Domain Description	Depth / Vol	Domain Justification
Domain #01 – Fill		
Surficial Fill was removed and stockpiled, remaining in-situ Fill comprised: • GRAVELLY/SILTY CLAY FILL: very stiff, moist to dry, medium plasticity gravelly reworked clay.	Between 0.10 - <0.6mbgl Volume - 3,000m^3	In accordance with IWRG702, the following has been allocated as a single soil Domain: • Comprised of reworked clay Fill consistent across the site area. • Consistent site history being residential land uses. • Consistency in chemical analysis – Douglas 2021).
Domain #02 – In-Situ Natural Soils		
In-situ natural soils comprise: • SILTY CLAY/CLAY: variably stiff to hard, moist to dry, low to high plasticity clay and silty clay to depths of 0.6 – 1.6m. • DACITE ROCK: initially very low to low strength, highly weathered, highly fractured dacite below depths of 0.9 – 2.0 m, becoming variably low to high strength with depth to the limit of investigation depths of 3.0 – 6.65 m.	To be determined in a separate assessment report in accordance with ACT EPA Information Sheet 10	In accordance with IWRG702, the following has been allocated as a single soil Domain: • In-situ natural residual clays and weathered dacite. • Consistent site history being residential land uses. • Consistency in chemical analysis – Douglas 2021).

4. Adequacy of Assessment

In accordance with IF4, Table 3 provides an assessment on the adequacy of the assessment including sample collection, Quality Assurance/Quality Control (QA/QC), analyte selection and sample rate.

Table 3: Adequacy of Assessement

Item	Description
Sample Collection	Samples were collected by Agon via freshly nitrile gloved hand from the test pit sample locations. Bulk undisturbed soil samples untouched by the excavator bucket walls were targeted for sample collection eliminating risk of cross contamination. Samples were sent under chain of custody documentation and in a chilled condition to the receiving NATA Accredited laboratory (Eurofins). Sample collection was in general accordance with the ASC (2013) NEPM, this is compliant with Section 65 of the Environment Protection Regulation 2005.
QA/QC	Agon adopted and reviewed the following QA/QC: • **Intra-laboratory and Inter-laboratory Duplicates**: Overall 5 duplicate pairs (3 intra and 2 inter) were assessed by Douglas and Agon. RPDs were within the acceptable range of <50%. • **Trip Blanks**: 4 Trip Blanks were used by Douglas; results were less than the laboratory detection limit. • **Trip Spikes**: 4 Trip Spikes were used by Douglas (2020); recoveries were within the acceptable range. On the basis of the QA/QC employed during the assessments reviewed by Agon, the accuracy and precision of the soil analysis data is adequate to support the findings of this report.
Sampling Rate	This reuse request relates to 3,000m^3 of in-situ soils, a total of 19 samples have been assessed with an overall analysis rate of 1 sample per 157m^3.
Analysis Rate	The contaminants of concern were analysed at the following rates: • Metals – 19 samples which equates to an analysis rate of 1 per 157m^3. • TRH – 19 samples which equates to an analysis rate of 1 per 157m^3. • BTEXN– 19 samples which equates to an analysis rate of 1 per 157m^3. • PAH – 19 samples which equates to an analysis rate of 1 per 157m^3. • PCB – 19 samples which equates to an analysis rate of 1 per 157m^3. • OPP/OCP – 19 samples which equates to an analysis rate of 1 per 157m^3. • Asbestos – No visual detected indicators of asbestos materials or demolition wastes were observed by Agon. In addition 4 Fill samples were assessed for asbestos fibres. The adopted sample rates are considered appropriate and justified for the purpose of categorising in-situ Fill for the purpose of bulk excavation with consideration of the 95%UCL which allows a sample rate of up to 1 per 250m^3.
Sample Locations	**Figure 1** shows the sample locations advanced for categorisation purposes. The distribution of samples is on a general grid basis across the site and are appropriately stratified through the soil profile (i.e. 0.2, 0.5m), refer **Figure 1**. **Note** – The site surface was grubbed into a stockpile, data from Douglas (2020) at depths of 0.0-0.1m have not been further considered in the dataset.
Summary	On the basis of the discussion provided above Agon consider the environmental assessments (i.e. analytes, sample collection, sample location, sample stratification, QA/QC and sample densities) undertaken at the site appropriate and justified to enable categorisation of in-situ Fill at the site.

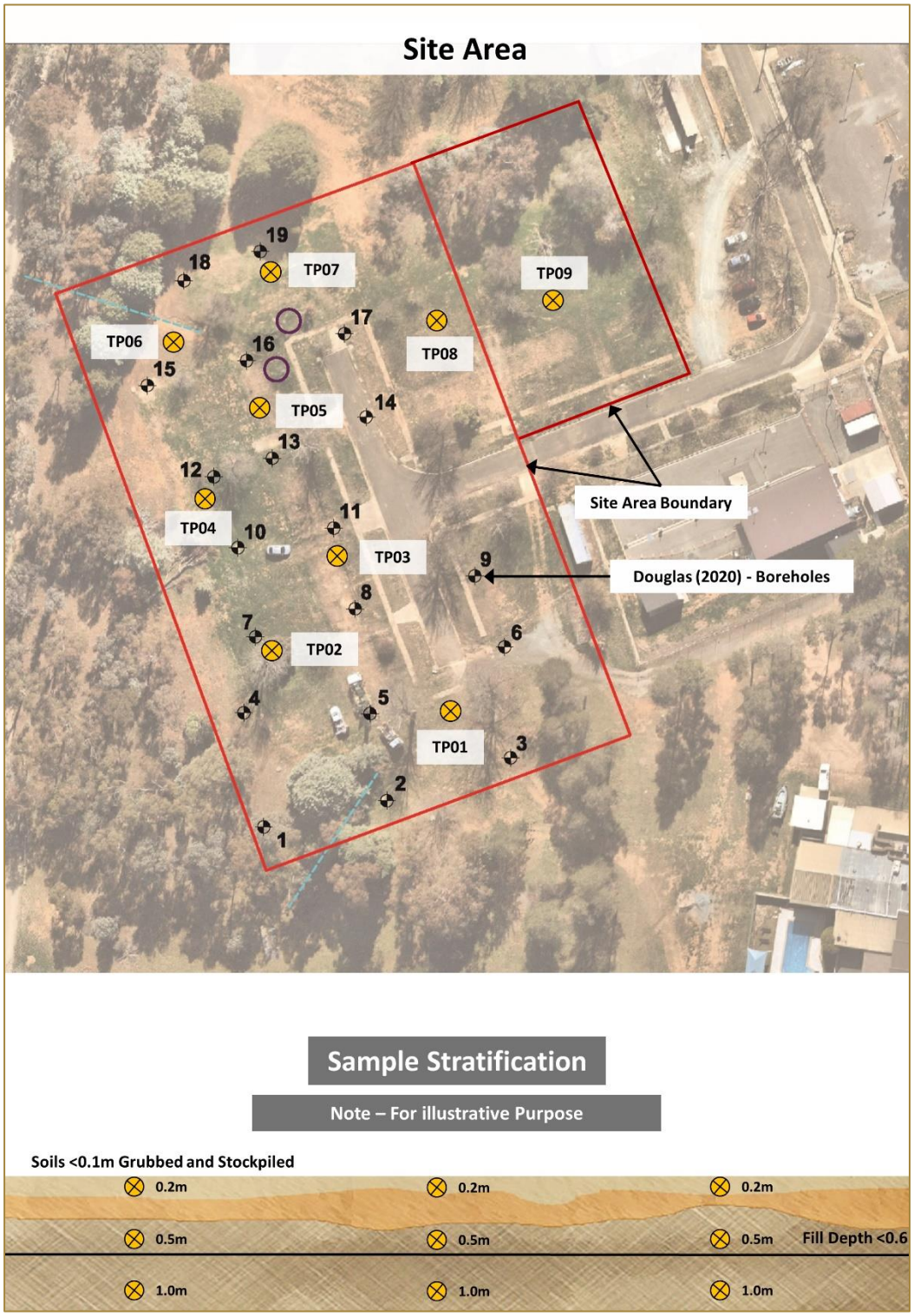


Figure 1: **Sample Location**
Source: **Base image sourced from ACTMapi**

5. Chemical Analysis Results

Current Site Status

At the time of this report, the following soils were removed from the site area and stockpiled separately within HMAS Harman:

- Asbestos impacted surface soils (<0.1m) at Bore 2, Bore 15 and two other areas identified in Douglas (2020) were excavated and stockpiled separately on the base under supervision of a licensed asbestos removalist as asbestos impacted soils. These areas were cleared by a Class A Asbestos Assessor (ACT Asbestos Assessments) and clearance certificate issued.
- All surface soils (boundary to boundary) were grubbed to remove grass and surface soils to a depth of approximately 100mm and are stockpiled separately on the base, these soils are no longer present in the site area.

Remaining In-situ Fill

All soil analysis results within the site were less than the adopted IF4 criteria with the exception of:

- Chromium (Total) – 16 samples reported Chromium between 53 and 130 mg/kg exceeding the IF criterion of 50 mg/kg

Tabulated results are provided as **Attachment 2** (along with calculated 95%UCLs) with corresponding laboratory certificates in **Attachment 3**. Statistical appraisal of the data, of metals with exceedances of IF4, is provided below in **Table 4**.

Table 4: Domain#01 – Statistical Appraisal

Analyte	IF4	No.	Min	Max	Mean	SD	95%UCL	Comment
Arsenic	**20**	19	2.7	16	8.9	3.6	9.30	Compliant IF4
Cadmium	**3**	19	<0.4	<0.4	-	-	-	Compliant IF4
Chromium	**50**	19	32	130	78.6	26.2	89.27	**Exceeds IF4**
Copper	**100**	19	12	44	27.5	10.5	31.77	Compliant IF4
Lead	**100**	19	11	33	19.6	4.8	21.55	Compliant IF4
Mercury	**1**	19	<0.1	<0.1	-	-	-	Compliant IF4
Nickel	**60**	19	6	44	24.4	11.4	29.05	Compliant IF4
Zinc	**200**	19	16	77	50.9	17.5	58.09	Compliant IF4

Statistically the 95%UCL for Chromium exceeded the IF4 criterion. The elevated Chromium concentrations were attributed to the local natural background range of reworked clays present in the Fill layer. To assess the suitability of Fill with naturally elevated Chromium (Total) Agon undertook ASLP analysis for Chromium (VI) which is considered the biggest risk driver. These results were compared to AQUA/4 criterion for the protection of waterways established in the Environment Protection Regulation 2005:

- **Chromium VI (ASLP)** – Leachable values were reported between <0.005 and 0.0.011 mg/L with a statistical mean of 0.006 mg/L marginally exceeding the AQUA/4 criterion of 0.002 mg/L.

Whilst exceedances of AQUA/4 criterion for leachate were identified, the overall risk of soils from the site to impact surface water and/or groundwater via leachate at Mugga 2 Quarry is considered to be low based on the following **Risk Assessment**:

- No human and surface water receptors identified within 500m of the site, no direct contaminant-source-pathway-linkages identified – **Low Risk**.

- Groundwater is estimated to be >20m below the site, no direct contaminant-source-pathway-linkages identified – **Low Risk**.
- Mugga 2 Quarry is clay lined to negate surface water ingress; in addition surface water is directed towards an internal sediment retention dam. No direct contaminant-source-pathway-linkages identified – **Low Risk**.
- Furthermore, the sediment retention dam and two groundwater monitoring wells which are assessed on a 6-monthly basis in accordance with Environmental Authorisation No. 1234.

On the basis of the **Risk Assessment** Agon consider the soils categorised in this report to be suitable for reuse at the Mugga 2 Quarry irrespective of marginal exceedances of IF4 criteria for Chromium (Total).

6. Reuse Site Acceptance

It is proposed that the material will be reused offsite as general fill at Mugga 2 Quarry at Block 2252 Jerrabomberra as general fill. The quarry was specifically established to receive reuse material (as approved by the ACT EPA) and VENM. This reuse setting is consistent with the requirements of IF4, that is reuse is occurring in an industrial land uses setting.

7. Conclusion

Agon conclude that sufficient sampling has occurred to enable categorisation of 3,000m^3 (estimated bulked volume) of Fill (logged at depths <0.6m) present at the site for offsite reuse as general fill at the Mugga 2 Quarry. This conclusion is made subject to the following conditions:

- The material must be placed at the reuse site in accordance with its Environmental Authorisation.
- The implementation of the Unexpected Finds Protocol (UFP) included as **Attachment 4**, during intrusive excavation works. Any vastly different soils (i.e. odorous, stained and/or pockets of anthropogenic inclusions) must be separated and inspected by an environmental consultant.

This report must be submitted, in digital format, to ContaminatedSites@act.gov.au in accordance with the requirements of ACT EPA (2020) Information Sheet 11 *'Environment Protection Authority Report Submission Requirements'*.

Kind regards

Sch 2.2(a)(ii)

ACT Manager

Attachment 1 Letter of Acceptance

From: Sch 2.2(a)(ii)
To:
Subject: RE: Reuse Acceptance - Part of Block 2249 Jerrabomberra
Date: Tuesday, 13 April 2021 1:05:36 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png
054-H_and_S-FO-002_Disposal_Form_2020-05-15 M2.pdf

Hi

Remondis will accept the 3,000m3 of BRU once approved by the EPA for disposal at Mugga 2 Quarry.

Attached is a disposal form

Regards

From: Canberra
Sent: Tuesday, 13 April 2021 1:02 PM
To: @remondis.com.au>
Subject: FW: Reuse Acceptance - Part of Block 2249 Jerrabomberra

From: @agonenviro.com.au>
Sent: Tuesday, 13 April 2021 10:11 AM
To: Canberra <Canberra@remondis.com.au>
Cc: @lendlease.com>
Subject: Reuse Acceptance - Part of Block 2249 Jerrabomberra

Hi Remondis,

On behalf of Lendlease, could Remondis accept to 3,000m3 of in-situ Fill to be excavated from Part of Block 2249 Jerrabomberra for reuse at the Mugga 2 Quarry. We are facilitating approval from the ACT EPA and require a letter of acceptance.

Cheers,

AGON ENVIRONMENTAL
ECAAS ECAAS ECAAS ECAAS
ISO 9001 ISO 14001 AS/NZS 4801 OHSAS 18001 CERTIFIED CERTIFIED CERTIFIED CERTIFIED
QUALITY ENVIRONMENTAL SAFETY SAFETY MANAGEMENT MANAGEMENT MANAGEMENT MANAGEMENT
Urban Development Institute of Australia SOUTH AUSTRALIA MEMBER

ACT Manager

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Attachment 2 Soil Analysis Results

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Table 1
Soil Analytical Results

HMAS Harman

				Metals									PAH			BTEX				TPH		PFAS	Asb
				Arsenic	Cadmium	Chromium	Chromium VI ASLP	Copper	Lead	Mercury	Nickel	Zinc	Benzo(a) pyrene	Naphthalene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene Total	C6-C9	+C10-C36 (Sum of total)	Sum (PFHxS + PFOS)	Fibre ID
				mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	D/ND
		EQL		4/2	0.4/1	5	0.0005	5	10	0.1	5	2./5	0.5	0.5/0.1	0.5	0.1	0.5/1	0.1	0.3	20	50	<5	-
ACT EPA Information Sheet 4 Table 1				**20**	**3**	**50**	**0.002**	**100**	**100**	**1**	**60**	**200**	**0.2**	**3**	**20**	**1**	**3**	**1**	**14**	**65**	**1000**	**-**	**ND**
Sample ID	Depth	Domain	Date																				
TP01_0.2	0.2	Fill	19/01/2021	12	< 0.4	**87**	**0.006**	28	21	< 0.1	30	55	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	-
TP01_0.5	0.5	Fill	19/01/2021	9.2	< 0.4	**77**	-	30	18	< 0.1	30	51	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
TP02_0.2	0.2	Fill	15/12/2020	3.9	< 0.4	**55**	**0.006**	13	20	< 0.1	13	31	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	-
TP02_0.5	0.5	Fill	17/12/2020	2.7	< 0.4	**85**	-	19	11	< 0.1	20	65	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP03_0.2	0.2	Fill	19/01/2021	5.5	< 0.4	**59**	-	12	16	< 0.1	12	31	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP03_0.5	0.5	Fill	19/01/2021	-	-	**-**	**0.005**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.2	0.2	Fill	7/01/2021	8.9	< 0.4	**73**	-	27	17	< 0.1	26	50	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP05_0.2	0.2	Fill	7/01/2021	12	< 0.4	**130**	**0.005**	34	21	< 0.1	32	54	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP05_0.5	0.5	Fill	19/01/2021	10	< 0.4	**100**	-	37	21	< 0.1	38	60	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP06_0.2	0.2	Fill	19/01/2021	11	< 0.4	**110**	-	42	23	< 0.1	43	74	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP06_0.5	0.5	Fill	19/01/2021	11	< 0.4	**120**	-	43	24	< 0.1	44	77	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP07_0.2	0.2	Fill	7/01/2021	9.3	< 0.4	**100**	**<0.005**	38	21	< 0.1	39	68	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP07_0.5	0.5	Fill	7/01/2021	10	< 0.4	**93**	-	37	21	< 0.1	33	54	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	-
TP08_0.2	0.2	Fill	7/01/2021	14	< 0.4	44	-	23	18	< 0.1	15	34	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP08_0.5	0.5	Fill	7/01/2021	4	< 0.4	**79**	-	25	18	< 0.1	19	64	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
TP09_0.2	0.2	Fill	12/01/2021	16	< 0.4	**53**	**0.011**	23	24	< 0.1	16	52	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP09_0.5	0.5	Fill	12/01/2021	5.2	< 0.4	**89**	-	44	33	< 0.1	23	71	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 2	0.5	Fill	11/08/2020	<4	<0.4	48	-	14	20	<0.1	10	42	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 9	0.5	Fill	11/08/2020	7	<0.4	32	-	12	13	<0.1	6	16	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
Bore 15	0.5	Fill	11/08/2020	<4	<0.4	**59**	-	21	12	<0.1	15	19	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
TP01_1.0	1.0	Natural	7/01/2021	7.8	< 0.4	**79**	-	27	14	< 0.1	34	50	-	-	-	-	-	-	-	-	-	-	-
TP01_2.0	2.0	Natural	14/12/2020	5.2	< 0.4	**66**	-	19	8.6	< 0.1	25	51	-	-	-	-	-	-	-	-	-	-	-
TP02_1.0	1.0	Natural	7/01/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_2.0	2.0	Natural	19/01/2021	2.7	< 0.4	**91**	-	18	14	< 0.1	20	68	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP03_0.5	0.5	Natural	19/01/2021	3.1	< 0.4	**100**	-	24	12	< 0.1	30	77	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP04_0.5	0.5	Natural	7/01/2021	11	< 0.4	**99**	-	38	19	< 0.1	42	65	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	N.D
TP04_1.0	1.0	Natural	7/01/2021	7.1	< 0.4	**98**	-	36	16	< 0.1	38	60	-	-	-	-	-	-	-	-	-	-	-
TP05_1.0	1.0	Natural	19/01/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06_1.0	1.0	Natural	7/01/2021	8.2	< 0.4	**100**	-	33	23	< 0.1	35	62	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP07_1.0	1.0	Natural	7/01/2021	7.3	< 0.4	**100**	-	29	19	0.1	30	43	-	-	-	-	-	-	-	-	-	-	-
TP08_1.0	1.0	Natural	12/01/2021	4.5	< 0.4	**62**	-	27	13	< 0.1	22	63	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP09_1.0	1.0	Natural	12/01/2021	5.2	< 0.4	**79**	-	29	28	< 0.1	23	82	-	-	-	-	-	-	-	-	-	-	-
Bore 4	3.0	Natural	11/08/2020	<4	<0.4	49	-	8	6	<0.1	14	52	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 6	1.0	Natural	11/08/2020	5	<0.4	46	-	17	9	<0.1	16	31	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 13	4.0	Natural	11/08/2020	<4	<0.4	45	-	14	7	<0.1	13	46	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 17	1.0	Natural	11/08/2020	<4	<0.4	35	-	14	6	<0.1	13	18	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 19	2.0	Natural	11/08/2020	<4	<0.4	43	-	14	34	<0.1	10	58	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
QC101		QA/QC	12/01/2021	2.3	< 0.4	**120**	-	24	11	< 0.1	24	81	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Statistics																							
Minimum Concentration				2.7	-	32.0	0.0050	12.0	11.0	0.1	6.0	16.0	-	-	-	-	-	-	-	-	-	-	-
Maximum Concentration				16.0	-	130.0	0.0110	44.0	33.0	0.1	44.0	77.0	-	-	-	-	-	-	-	-	-	-	-
Average Concentration *				8.9	-	78.6	0.0066	27.5	19.6	0.1	24.4	50.9	-	-	-	-	-	-	-	-	-	-	-
Standard Deviation *				3.6	-	26.2	0.0022	10.5	4.8	0.0	11.4	17.5	-	-	-	-	-	-	-	-	-	-	-

UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.130/03/2021 7:01:53 PM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

Arsenic

General Statistics

Total Number of Observations	19	Number of Distinct Observations	14
		Number of Missing Observations	0
Minimum	2.7	Mean	8.405
Maximum	16	Median	9.2
SD	3.85	Std. Error of Mean	0.883
Coefficient of Variation	0.458	Skewness	0.17

Normal GOF Test

Shapiro Wilk Test Statistic	0.942	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.143	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.197	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	9.937	95% Adjusted-CLT UCL (Chen-1995)	9.895
		95% Modified-t UCL (Johnson-1978)	9.943

Gamma GOF Test

A-D Test Statistic	0.629	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.744	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.189	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.199	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.443	k star (bias corrected MLE)	3.776
Theta hat (MLE)	1.892	Theta star (bias corrected MLE)	2.226
nu hat (MLE)	168.8	nu star (bias corrected)	143.5
MLE Mean (bias corrected)	8.405	MLE Sd (bias corrected)	4.325
		Approximate Chi Square Value (0.05)	116.8
Adjusted Level of Significance	0.0369	Adjusted Chi Square Value	114.7

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	10.33	95% Adjusted Gamma UCL (use when n<50)	10.51

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.919	**Shapiro Wilk Lognormal GOF Test**
5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.21	**Lilliefors Lognormal GOF Test**
5% Lilliefors Critical Value	0.197	Data Not Lognormal at 5% Significance Level

56	**Data appear Approximate Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59					Minimum of Logged Data	0.993			Mean of logged Data	2.012		
60					Maximum of Logged Data	2.773			SD of logged Data	0.52		
61												
62	**Assuming Lognormal Distribution**											
63					95% H-UCL	10.98			90% Chebyshev (MVUE) UCL	11.65		
64					95% Chebyshev (MVUE) UCL	13.09			97.5% Chebyshev (MVUE) UCL	15.07		
65					99% Chebyshev (MVUE) UCL	18.97						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71					95% CLT UCL	9.858			95% Jackknife UCL	9.937		
72					95% Standard Bootstrap UCL	9.815			95% Bootstrap-t UCL	10.03		
73					95% Hall's Bootstrap UCL	9.903			95% Percentile Bootstrap UCL	9.858		
74					95% BCA Bootstrap UCL	9.826						
75					90% Chebyshev(Mean, Sd) UCL	11.06			95% Chebyshev(Mean, Sd) UCL	12.26		
76					97.5% Chebyshev(Mean, Sd) UCL	13.92			99% Chebyshev(Mean, Sd) UCL	17.19		
77												
78	**Suggested UCL to Use**											
79					95% Student's-t UCL	9.937						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86												
87	**Chromium**											
88												
89	**General Statistics**											
90					Total Number of Observations	19			Number of Distinct Observations	17		
91									Number of Missing Observations	0		
92					Minimum	32			Mean	78.58		
93					Maximum	130			Median	79		
94					SD	26.88			Std. Error of Mean	6.166		
95					Coefficient of Variation	0.342			Skewness	0.149		
96												
97	**Normal GOF Test**											
98					Shapiro Wilk Test Statistic	0.979			**Shapiro Wilk GOF Test**			
99					5% Shapiro Wilk Critical Value	0.901			Data appear Normal at 5% Significance Level			
100					Lilliefors Test Statistic	0.135			**Lilliefors GOF Test**			
101					5% Lilliefors Critical Value	0.197			Data appear Normal at 5% Significance Level			
102	**Data appear Normal at 5% Significance Level**											
103												
104	**Assuming Normal Distribution**											
105	**95% Normal UCL**								**95% UCLs (Adjusted for Skewness)**			
106					95% Student's-t UCL	89.27			95% Adjusted-CLT UCL (Chen-1995)	88.95		
107									95% Modified-t UCL (Johnson-1978)	89.31		
108												
109	**Gamma GOF Test**											
110					A-D Test Statistic	0.231			**Anderson-Darling Gamma GOF Test**			

	A	B	C	D	E	F	G	H	I	J	K	L
111					5% A-D Critical Value	0.742	Detected data appear Gamma Distributed at 5% Significance Level					
112					K-S Test Statistic	0.117	**Kolmogorov-Smirnov Gamma GOF Test**					
113					5% K-S Critical Value	0.199	Detected data appear Gamma Distributed at 5% Significance Level					
114	**Detected data appear Gamma Distributed at 5% Significance Level**											
115												
116	**Gamma Statistics**											
117					k hat (MLE)	8.319			k star (bias corrected MLE)			7.041
118					Theta hat (MLE)	9.446			Theta star (bias corrected MLE)			11.16
119					nu hat (MLE)	316.1			nu star (bias corrected)			267.5
120					MLE Mean (bias corrected)	78.58			MLE Sd (bias corrected)			29.61
121									Approximate Chi Square Value (0.05)			230.7
122					Adjusted Level of Significance	0.0369			Adjusted Chi Square Value			227.7
123												
124	**Assuming Gamma Distribution**											
125					95% Approximate Gamma UCL (use when n>=50))	91.14			95% Adjusted Gamma UCL (use when n<50)			92.34
126												
127	**Lognormal GOF Test**											
128					Shapiro Wilk Test Statistic	0.964	**Shapiro Wilk Lognormal GOF Test**					
129					5% Shapiro Wilk Critical Value	0.901	Data appear Lognormal at 5% Significance Level					
130					Lilliefors Test Statistic	0.123	**Lilliefors Lognormal GOF Test**					
131					5% Lilliefors Critical Value	0.197	Data appear Lognormal at 5% Significance Level					
132	**Data appear Lognormal at 5% Significance Level**											
133												
134	**Lognormal Statistics**											
135					Minimum of Logged Data	3.466			Mean of logged Data			4.303
136					Maximum of Logged Data	4.868			SD of logged Data			0.372
137												
138	**Assuming Lognormal Distribution**											
139					95% H-UCL	93.54			90% Chebyshev (MVUE) UCL			99.5
140					95% Chebyshev (MVUE) UCL	108.8			97.5% Chebyshev (MVUE) UCL			121.8
141					99% Chebyshev (MVUE) UCL	147.2						
142												
143	**Nonparametric Distribution Free UCL Statistics**											
144	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
145												
146	**Nonparametric Distribution Free UCLs**											
147					95% CLT UCL	88.72			95% Jackknife UCL			89.27
148					95% Standard Bootstrap UCL	88.8			95% Bootstrap-t UCL			89.76
149					95% Hall's Bootstrap UCL	89.57			95% Percentile Bootstrap UCL			88.47
150					95% BCA Bootstrap UCL	88.79						
151					90% Chebyshev(Mean, Sd) UCL	97.08			95% Chebyshev(Mean, Sd) UCL			105.5
152					97.5% Chebyshev(Mean, Sd) UCL	117.1			99% Chebyshev(Mean, Sd) UCL			139.9
153												
154	**Suggested UCL to Use**											
155					95% Student's-t UCL	89.27						
156												
157	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
158	Recommendations are based upon data size, data distribution, and skewness.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
160	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
161												
162												
163	**Copper**											
164												
165	**General Statistics**											

166	Total Number of Observations				19	Number of Distinct Observations						16
167						Number of Missing Observations						0
168	Minimum				12	Mean						27.47
169	Maximum				44	Median						27
170	SD				10.79	Std. Error of Mean						2.476
171	Coefficient of Variation				0.393	Skewness						0.0271
172												
173	**Normal GOF Test**											
174	Shapiro Wilk Test Statistic				0.936	**Shapiro Wilk GOF Test**						
175	5% Shapiro Wilk Critical Value				0.901	Data appear Normal at 5% Significance Level						
176	Lilliefors Test Statistic				0.127	**Lilliefors GOF Test**						
177	5% Lilliefors Critical Value				0.197	Data appear Normal at 5% Significance Level						
178	**Data appear Normal at 5% Significance Level**											
179												
180	**Assuming Normal Distribution**											
181	**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**						
182	95% Student's-t UCL				31.77	95% Adjusted-CLT UCL (Chen-1995)						31.56
183						95% Modified-t UCL (Johnson-1978)						31.77
184												
185	**Gamma GOF Test**											
186	A-D Test Statistic				0.441	**Anderson-Darling Gamma GOF Test**						
187	5% A-D Critical Value				0.742	Detected data appear Gamma Distributed at 5% Significance Level						
188	K-S Test Statistic				0.133	**Kolmogorov-Smirnov Gamma GOF Test**						
189	5% K-S Critical Value				0.199	Detected data appear Gamma Distributed at 5% Significance Level						
190	**Detected data appear Gamma Distributed at 5% Significance Level**											
191												
192	**Gamma Statistics**											
193	k hat (MLE)				6.097	k star (bias corrected MLE)						5.169
194	Theta hat (MLE)				4.506	Theta star (bias corrected MLE)						5.315
195	nu hat (MLE)				231.7	nu star (bias corrected)						196.4
196	MLE Mean (bias corrected)				27.47	MLE Sd (bias corrected)						12.08
197						Approximate Chi Square Value (0.05)						165
198	Adjusted Level of Significance				0.0369	Adjusted Chi Square Value						162.5
199												
200	**Assuming Gamma Distribution**											
201	95% Approximate Gamma UCL (use when n>=50))				32.71	95% Adjusted Gamma UCL (use when n<50)						33.21
202												
203	**Lognormal GOF Test**											
204	Shapiro Wilk Test Statistic				0.913	**Shapiro Wilk Lognormal GOF Test**						
205	5% Shapiro Wilk Critical Value				0.901	Data appear Lognormal at 5% Significance Level						
206	Lilliefors Test Statistic				0.124	**Lilliefors Lognormal GOF Test**						
207	5% Lilliefors Critical Value				0.197	Data appear Lognormal at 5% Significance Level						
208	**Data appear Lognormal at 5% Significance Level**											
209												
210	**Lognormal Statistics**											
211	Minimum of Logged Data				2.485	Mean of logged Data						3.229
212	Maximum of Logged Data				3.784	SD of logged Data						0.439
213												
214	**Assuming Lognormal Distribution**											
215	95% H-UCL				34.04	90% Chebyshev (MVUE) UCL						36.25
216	95% Chebyshev (MVUE) UCL				40.14	97.5% Chebyshev (MVUE) UCL						45.54
217	99% Chebyshev (MVUE) UCL				56.16							
218												
219	**Nonparametric Distribution Free UCL Statistics**											
220	**Data appear to follow a Discernible Distribution at 5% Significance Level**											

221											
222	**Nonparametric Distribution Free UCLs**										
223				95% CLT UCL	31.55			95% Jackknife UCL	31.77		
224				95% Standard Bootstrap UCL	31.44			95% Bootstrap-t UCL	31.75		
225				95% Hall's Bootstrap UCL	31.57			95% Percentile Bootstrap UCL	31.58		
226				95% BCA Bootstrap UCL	31.26						
227				90% Chebyshev(Mean, Sd) UCL	34.9			95% Chebyshev(Mean, Sd) UCL	38.27		
228				97.5% Chebyshev(Mean, Sd) UCL	42.94			99% Chebyshev(Mean, Sd) UCL	52.11		
229											
230	**Suggested UCL to Use**										
231				95% Student's-t UCL	31.77						
232											
233	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.										
234	Recommendations are based upon data size, data distribution, and skewness.										
235	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).										
236	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.										
237											
238											
239	**Lead**										
240											
241	**General Statistics**										
242				Total Number of Observations	19			Number of Distinct Observations	11		
243								Number of Missing Observations	0		
244				Minimum	11			Mean	19.58		
245				Maximum	33			Median	20		
246				SD	4.959			Std. Error of Mean	1.138		
247				Coefficient of Variation	0.253			Skewness	0.62		
248											
249	**Normal GOF Test**										
250				Shapiro Wilk Test Statistic	0.926			**Shapiro Wilk GOF Test**			
251				5% Shapiro Wilk Critical Value	0.901			Data appear Normal at 5% Significance Level			
252				Lilliefors Test Statistic	0.177			**Lilliefors GOF Test**			
253				5% Lilliefors Critical Value	0.197			Data appear Normal at 5% Significance Level			
254	**Data appear Normal at 5% Significance Level**										
255											
256	**Assuming Normal Distribution**										
257				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
258				95% Student's-t UCL	21.55			95% Adjusted-CLT UCL (Chen-1995)	21.62		
259								95% Modified-t UCL (Johnson-1978)	21.58		
260											
261	**Gamma GOF Test**										
262				A-D Test Statistic	0.571			**Anderson-Darling Gamma GOF Test**			
263				5% A-D Critical Value	0.741			Detected data appear Gamma Distributed at 5% Significance Level			
264				K-S Test Statistic	0.146			**Kolmogorov-Smirnov Gamma GOF Test**			
265				5% K-S Critical Value	0.198			Detected data appear Gamma Distributed at 5% Significance Level			
266	**Detected data appear Gamma Distributed at 5% Significance Level**										
267											
268	**Gamma Statistics**										
269				k hat (MLE)	16.33			k star (bias corrected MLE)	13.78		
270				Theta hat (MLE)	1.199			Theta star (bias corrected MLE)	1.42		
271				nu hat (MLE)	620.4			nu star (bias corrected)	523.8		
272				MLE Mean (bias corrected)	19.58			MLE Sd (bias corrected)	5.273		
273								Approximate Chi Square Value (0.05)	471.7		
274				Adjusted Level of Significance	0.0369			Adjusted Chi Square Value	467.4		
275											

	A	B	C	D	E	F	G	H	I	J	K	L
276	**Assuming Gamma Distribution**											
277	95% Approximate Gamma UCL (use when n>=50))					21.74	95% Adjusted Gamma UCL (use when n<50)					21.94
278												
279	**Lognormal GOF Test**											
280	Shapiro Wilk Test Statistic					0.935	**Shapiro Wilk Lognormal GOF Test**					
281	5% Shapiro Wilk Critical Value					0.901	Data appear Lognormal at 5% Significance Level					
282	Lilliefors Test Statistic					0.159	**Lilliefors Lognormal GOF Test**					
283	5% Lilliefors Critical Value					0.197	Data appear Lognormal at 5% Significance Level					
284	**Data appear Lognormal at 5% Significance Level**											
285												
286	**Lognormal Statistics**											
287	Minimum of Logged Data					2.398	Mean of logged Data					2.944
288	Maximum of Logged Data					3.497	SD of logged Data					0.259
289												
290	**Assuming Lognormal Distribution**											
291	95% H-UCL					21.94	90% Chebyshev (MVUE) UCL					23.13
292	95% Chebyshev (MVUE) UCL					24.73	97.5% Chebyshev (MVUE) UCL					26.95
293	99% Chebyshev (MVUE) UCL					31.31						
294												
295	**Nonparametric Distribution Free UCL Statistics**											
296	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
297												
298	**Nonparametric Distribution Free UCLs**											
299	95% CLT UCL					21.45	95% Jackknife UCL					21.55
300	95% Standard Bootstrap UCL					21.39	95% Bootstrap-t UCL					21.75
301	95% Hall's Bootstrap UCL					22.14	95% Percentile Bootstrap UCL					21.42
302	95% BCA Bootstrap UCL					21.58						
303	90% Chebyshev(Mean, Sd) UCL					22.99	95% Chebyshev(Mean, Sd) UCL					24.54
304	97.5% Chebyshev(Mean, Sd) UCL					26.68	99% Chebyshev(Mean, Sd) UCL					30.9
305												
306	**Suggested UCL to Use**											
307	95% Student's-t UCL					21.55						
308												
309	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
310	Recommendations are based upon data size, data distribution, and skewness.											
311	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
312	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
313												
314												
315	**Nickel**											
316												
317	**General Statistics**											
318	Total Number of Observations					19	Number of Distinct Observations					17
319							Number of Missing Observations					0
320	Minimum					6	Mean					24.42
321	Maximum					44	Median					23
322	SD					11.67	Std. Error of Mean					2.678
323	Coefficient of Variation					0.478	Skewness					0.225
324												
325	**Normal GOF Test**											
326	Shapiro Wilk Test Statistic					0.95	**Shapiro Wilk GOF Test**					
327	5% Shapiro Wilk Critical Value					0.901	Data appear Normal at 5% Significance Level					
328	Lilliefors Test Statistic					0.133	**Lilliefors GOF Test**					
329	5% Lilliefors Critical Value					0.197	Data appear Normal at 5% Significance Level					
330	**Data appear Normal at 5% Significance Level**											

331												
332	**Assuming Normal Distribution**											
333	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
334				95% Student's-t UCL		29.06				95% Adjusted-CLT UCL (Chen-1995)		28.97
335										95% Modified-t UCL (Johnson-1978)		29.09
336												
337	**Gamma GOF Test**											
338				A-D Test Statistic		0.293	**Anderson-Darling Gamma GOF Test**					
339				5% A-D Critical Value		0.745	Detected data appear Gamma Distributed at 5% Significance Level					
340				K-S Test Statistic		0.144	**Kolmogorov-Smirnov Gamma GOF Test**					
341				5% K-S Critical Value		0.199	Detected data appear Gamma Distributed at 5% Significance Level					
342	**Detected data appear Gamma Distributed at 5% Significance Level**											
343												
344	**Gamma Statistics**											
345				k hat (MLE)		4.06				k star (bias corrected MLE)		3.454
346				Theta hat (MLE)		6.016				Theta star (bias corrected MLE)		7.071
347				nu hat (MLE)		154.3				nu star (bias corrected)		131.2
348				MLE Mean (bias corrected)		24.42				MLE Sd (bias corrected)		13.14
349										Approximate Chi Square Value (0.05)		105.8
350				Adjusted Level of Significance		0.0369				Adjusted Chi Square Value		103.8
351												
352	**Assuming Gamma Distribution**											
353				95% Approximate Gamma UCL (use when n>=50))		30.3				95% Adjusted Gamma UCL (use when n<50)		30.88
354												
355	**Lognormal GOF Test**											
356				Shapiro Wilk Test Statistic		0.947	**Shapiro Wilk Lognormal GOF Test**					
357				5% Shapiro Wilk Critical Value		0.901	Data appear Lognormal at 5% Significance Level					
358				Lilliefors Test Statistic		0.149	**Lilliefors Lognormal GOF Test**					
359				5% Lilliefors Critical Value		0.197	Data appear Lognormal at 5% Significance Level					
360	**Data appear Lognormal at 5% Significance Level**											
361												
362	**Lognormal Statistics**											
363				Minimum of Logged Data		1.792				Mean of logged Data		3.067
364				Maximum of Logged Data		3.784				SD of logged Data		0.55
365												
366	**Assuming Lognormal Distribution**											
367				95% H-UCL		32.64				90% Chebyshev (MVUE) UCL		34.55
368				95% Chebyshev (MVUE) UCL		38.98				97.5% Chebyshev (MVUE) UCL		45.13
369				99% Chebyshev (MVUE) UCL		57.21						
370												
371	**Nonparametric Distribution Free UCL Statistics**											
372	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
373												
374	**Nonparametric Distribution Free UCLs**											
375				95% CLT UCL		28.83				95% Jackknife UCL		29.06
376				95% Standard Bootstrap UCL		28.72				95% Bootstrap-t UCL		29.31
377				95% Hall's Bootstrap UCL		28.8				95% Percentile Bootstrap UCL		29.05
378				95% BCA Bootstrap UCL		28.68						
379				90% Chebyshev(Mean, Sd) UCL		32.45				95% Chebyshev(Mean, Sd) UCL		36.09
380				97.5% Chebyshev(Mean, Sd) UCL		41.14				99% Chebyshev(Mean, Sd) UCL		51.07
381												
382	**Suggested UCL to Use**											
383				95% Student's-t UCL		29.06						
384												
385	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											

386	Recommendations are based upon data size, data distribution, and skewness.											
387	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
388	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
389												
390												
391	**Zinc**											
392												
393	**General Statistics**											
394						Total Number of Observations	19			Number of Distinct Observations	17	
395										Number of Missing Observations	0	
396						Minimum	16			Mean	50.95	
397						Maximum	77			Median	54	
398						SD	17.94			Std. Error of Mean	4.116	
399						Coefficient of Variation	0.352			Skewness	-0.515	
400												
401	**Normal GOF Test**											
402						Shapiro Wilk Test Statistic	0.947			**Shapiro Wilk GOF Test**		
403						5% Shapiro Wilk Critical Value	0.901			Data appear Normal at 5% Significance Level		
404						Lilliefors Test Statistic	0.163			**Lilliefors GOF Test**		
405						5% Lilliefors Critical Value	0.197			Data appear Normal at 5% Significance Level		
406	**Data appear Normal at 5% Significance Level**											
407												
408	**Assuming Normal Distribution**											
409						**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
410						95% Student's-t UCL	58.09			95% Adjusted-CLT UCL (Chen-1995)	57.2	
411										95% Modified-t UCL (Johnson-1978)	58	
412												
413	**Gamma GOF Test**											
414						A-D Test Statistic	0.732			**Anderson-Darling Gamma GOF Test**		
415						5% A-D Critical Value	0.742			Detected data appear Gamma Distributed at 5% Significance Level		
416						K-S Test Statistic	0.218			**Kolmogorov-Smirnov Gamma GOF Test**		
417						5% K-S Critical Value	0.199			Data Not Gamma Distributed at 5% Significance Level		
418	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
419												
420	**Gamma Statistics**											
421						k hat (MLE)	6.504			k star (bias corrected MLE)	5.512	
422						Theta hat (MLE)	7.833			Theta star (bias corrected MLE)	9.243	
423						nu hat (MLE)	247.2			nu star (bias corrected)	209.5	
424						MLE Mean (bias corrected)	50.95			MLE Sd (bias corrected)	21.7	
425										Approximate Chi Square Value (0.05)	177	
426						Adjusted Level of Significance	0.0369			Adjusted Chi Square Value	174.4	
427												
428	**Assuming Gamma Distribution**											
429						95% Approximate Gamma UCL (use when n>=50))	60.3			95% Adjusted Gamma UCL (use when n<50)	61.2	
430												
431	**Lognormal GOF Test**											
432						Shapiro Wilk Test Statistic	0.865			**Shapiro Wilk Lognormal GOF Test**		
433						5% Shapiro Wilk Critical Value	0.901			Data Not Lognormal at 5% Significance Level		
434						Lilliefors Test Statistic	0.238			**Lilliefors Lognormal GOF Test**		
435						5% Lilliefors Critical Value	0.197			Data Not Lognormal at 5% Significance Level		
436	**Data Not Lognormal at 5% Significance Level**											
437												
438	**Lognormal Statistics**											
439						Minimum of Logged Data	2.773			Mean of logged Data	3.852	
440						Maximum of Logged Data	4.344			SD of logged Data	0.444	

	A	B	C	D	E	F	G	H	I	J	K	L
441												
442	**Assuming Lognormal Distribution**											
443					95% H-UCL	63.77			90% Chebyshev (MVUE) UCL			67.9
444					95% Chebyshev (MVUE) UCL	75.25			97.5% Chebyshev (MVUE) UCL			85.46
445					99% Chebyshev (MVUE) UCL	105.5						
446												
447	**Nonparametric Distribution Free UCL Statistics**											
448	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
449												
450	**Nonparametric Distribution Free UCLs**											
451					95% CLT UCL	57.72			95% Jackknife UCL			58.09
452					95% Standard Bootstrap UCL	57.79			95% Bootstrap-t UCL			57.88
453					95% Hall's Bootstrap UCL	57.23			95% Percentile Bootstrap UCL			57.68
454					95% BCA Bootstrap UCL	56.89						
455					90% Chebyshev(Mean, Sd) UCL	63.3			95% Chebyshev(Mean, Sd) UCL			68.89
456					97.5% Chebyshev(Mean, Sd) UCL	76.65			99% Chebyshev(Mean, Sd) UCL			91.9
457												
458	**Suggested UCL to Use**											
459					95% Student's-t UCL	58.09						
460												
461	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
462	Recommendations are based upon data size, data distribution, and skewness.											
463	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
464	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
465												
466	**Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be**											
467	**reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.**											
468												

Attachment 3 Laboratory Certificates

CHAIN OF CUSTODY RECORD

☑ Sydney Laboratory
Unit F3 Bld F, 16 Mars Rd Lane Cove West, NSW 2066

☐ Jolane Laboratory
Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000

Company	Agon	Project №	-	Project Manager	JO
Address	4/10 Kennedy St Kingston	Project Name	HMA	EDD Format (ESdat, EQuIS, Custom)	ESDAT
Contact Name	[redacted]				
Phone №					
Special Directions	For Metals Analysis - 50g sample to be dryed, passed through a 2mm sieve, crushed and homogenised prior to metals analysis				
Purchase Order					
Quote ID №	Quotation # 190123AEGA				

Sampler(s)	OP/JO
Handed over by	J.O
Email for Invoice	[redacted]@agonenviro.com.au; finance@agonenviro.com.au;
Email for Results	[redacted]@agonenviro.com.au

Analyses (Mark where tests are required (previously "Y" or "Yes") SUBMIT ONLY requested analytes)

Containers

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

☐ Overnight (8am)* ☐ 1 Day* ☑ 2 Day* ☐ 3 Day* ☐ 5 Day
* Surcharges apply
☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals - See Special Instructions	RS Suite (8 Metals, No Fluoride or Cyanide) - See Special Instructions	Asbestos ID	PFAS Short Suite Standard LOR	Jar (Glass)	Jar (HDPE)	Bag 500ml_ACM	Bag Add Sipthalic Soil	Small plastic bottle	Vial (headspace)	Plastic bottle (preservative)	Amber bottle	Sample Comments / Dangerous Goods Hazard Warning
1	TP01_0.2	19.3.21	S				X									
2	TP01_0.5	19.3.21	S													
3	TP01_1.0	19.3.21	S													
4	TP01_2.0	19.3.21	S													
5	TP02_0.2	19.3.21	S				X									
6	TP02_0.5	19.3.21	S													
7	TP02_1.0	19.3.21	S													
8	TP02_2.0	19.3.21	S													
9	TP03_0.2	19.3.21	S													
10	TP03_0.5	19.3.21	S													
11	TP04_0.2	19.3.21	S													
12	TP04_0.5	19.3.21	S													
13	TP04_1.0	19.3.21	S													
14	TP05_0.2	19.3.21	S													
15	TP05_0.5	19.3.21	S				X									
16	TP05_1.0	19.3.21	S													
17	TP06_0.2	19.3.21	S													
18	TP06_0.5	19.3.21	S													
19	TP06_1.0	19.3.21	S													
20	TP07_0.2	19.3.21	S													
21	TP07_0.5	19.3.21	S				X									
22	TP07_1.0	19.3.21	S													
23	TP08_0.2	19.3.21	S													
24	TP08_0.5	19.3.21	S													
25	TP08_1.0	19.3.21	S													
26	TP09_0.2	19.3.21	S													
27	TP09_0.5	19.3.21	S													
28	TP09_1.0	19.3.21	S													
29	QC101	19.3.21	S													
13																
15																
14																
11																
44																

[redacted]

23/3 10.33AM

#782134

CHAIN OF CUSTODY RECORD

☑ Sydney Laboratory
Unit P3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh
03 8564 9000

Company	Agon	Project No	-
Address	4/10 Kennedy St Kingston	Project Name	HMA
Contact Name			
Phone No			
Special Directions	For Metals Analysis - 50g sample to be dryed, passed through a 2mm sieve, crushed and homogenised prior to metals analysis		
Purchase Order			
Quote ID No	Quotation # 190123AEGA		

Project Manager	JO	Sampler(s)	OP/JO
EDD Format (ESdat, EQuIS, Custom)	ESDAT	Handed over by	J.O
		Email for Invoice	agonenviro.com.au; finance@agonenviro.com.au;
		Email for Results	agonenviro.com.au

Analysis Req. Whereworks are required, please specify "Date" or "Stated" SAFE work must be undertaken within 30hrs of sampling

No	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	6 Metals - See Special Instructions	R6 Suite (6 Metals, No Fluorides or Cyanide) - See Special Instructions	Asbestos ID	PFAS Standard LOR
1	TP01_0.2	19.3.21	S		X		
2	TP01_0.5	19.3.21	S		X	X	
3	TP01_1.0	19.3.21	S	X			
4	TP01_2.0	19.3.21	S	X			
5	TP02_0.2	19.3.21	S		X		
6	TP02_0.5	19.3.21	S		X		
7	TP02_1.0	19.3.21	S				
8	TP02_2.0	19.3.21	S		X		
9	TP03_0.2	19.3.21	S		X		
10	TP03_0.5	19.3.21	S		X		
11	TP04_0.2	19.3.21	S		X		
12	TP04_0.5	19.3.21	S		X	X	
13	TP04_1.0	19.3.21	S	X			
14	TP05_0.2	19.3.21	S		X		
15	TP05_0.5	19.3.21	S		X		
16	TP05_1.0	19.3.21	S				
17	TP06_0.2	19.3.21	S		X		
18	TP06_0.5	19.3.21	S		X		
19	TP06_1.0	19.3.21	S		X		
20	TP07_0.2	19.3.21	S		X		
21	TP07_0.5	19.3.21	S		X		
22	TP07_1.0	19.3.21	S	X			
23	TP08_0.2	19.3.21	S		X		
24	TP08_0.5	19.3.21	S		X	X	
25	TP08_1.0	19.3.21	S		X		
26	TP09_0.2	19.3.21	S		X		
27	TP09_0.5	19.3.21	S		X		
28	TP09_1.0	19.3.21	S	X			
29	QC101	19.3.21	S		X		
15							
16							
14							
14							
14							

Containers: Jar (Glass) | Jar (HDPE) | Bag 500mL ACM | Bag Acid Sulphate Soil | Small plastic bottle | Vial (zero headspace) | Plastic bottle (nitrogenated) | Amber bottle

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

- ☐ Overnight (3am)*
- ☐ 1 Day*
- ☑ 2 Day*
- ☐ 3 Day*
- ☐ 5 Day
- ☐ Other ( )

* Surcharges apply

Sample Comments / Dangerous Goods Hazard Warning

23/3

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Certificate of Analysis

Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:	
Report	782134-AID
Project Name	HMA
Received Date	Mar 22, 2021
Date Reported	Mar 25, 2021

Methodology:

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

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.

Project Name HMA
Project ID
Date Sampled Mar 19, 2021
Report 782134-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP01_0.5	21-Ma40648	Mar 19, 2021	Approximate Sample 45g Sample consisted of: Red-brown coarse-grained clayey soil	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP04_0.5	21-Ma40658	Mar 19, 2021	Approximate Sample 49g Sample consisted of: Red-brown coarse-grained clayey soil	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP08_0.5	21-Ma40670	Mar 19, 2021	Approximate Sample 52g Sample consisted of: Brown coarse-grained clayey soil	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Mar 23, 2021	Indefinite

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

Australia

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

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

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

Perth
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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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

New Zealand

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

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

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	TP01_0.2	Mar 19, 2021		Soil	S21-Ma40647				X	X	X	X
2	TP01_0.5	Mar 19, 2021		Soil	S21-Ma40648	X			X	X	X	
3	TP01_1.0	Mar 19, 2021		Soil	S21-Ma40649			X		X		
4	TP01_2.0	Mar 19, 2021		Soil	S21-Ma40650			X		X		
5	TP02_0.2	Mar 19, 2021		Soil	S21-Ma40651				X	X	X	X
6	TP02_0.5	Mar 19, 2021		Soil	S21-Ma40652				X	X	X	
7	TP02_1.0	Mar 19, 2021		Soil	S21-Ma40653		X					
8	TP02_2.0	Mar 19, 2021		Soil	S21-Ma40654				X	X	X	
9	TP03_0.2	Mar 19, 2021		Soil	S21-Ma40655				X	X	X	
10	TP03_0.5	Mar 19, 2021		Soil	S21-Ma40656				X	X	X	

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

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IANZ # 1327

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

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
11	TP04_0.2	Mar 19, 2021		Soil	S21-Ma40657				X	X	X	
12	TP04_0.5	Mar 19, 2021		Soil	S21-Ma40658	X			X	X	X	
13	TP04_1.0	Mar 19, 2021		Soil	S21-Ma40659			X		X		
14	TP05_0.2	Mar 19, 2021		Soil	S21-Ma40660				X	X	X	
15	TP05_0.5	Mar 19, 2021		Soil	S21-Ma40661				X	X	X	X
16	TP05_1.0	Mar 19, 2021		Soil	S21-Ma40662		X					
17	TP06_0.2	Mar 19, 2021		Soil	S21-Ma40663				X	X	X	
18	TP06_0.5	Mar 19, 2021		Soil	S21-Ma40664				X	X	X	
19	TP06_1.0	Mar 19, 2021		Soil	S21-Ma40665				X	X	X	
20	TP07_0.2	Mar 19, 2021		Soil	S21-Ma40666				X	X	X	
21	TP07_0.5	Mar 19, 2021		Soil	S21-Ma40667				X	X	X	X

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IANZ # 1290

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
22	TP07_1.0	Mar 19, 2021		Soil	S21-Ma40668			X		X		
23	TP08_0.2	Mar 19, 2021		Soil	S21-Ma40669				X	X	X	
24	TP08_0.5	Mar 19, 2021		Soil	S21-Ma40670	X			X	X	X	
25	TP08_1.0	Mar 19, 2021		Soil	S21-Ma40671				X	X	X	
26	TP09_0.2	Mar 19, 2021		Soil	S21-Ma40672				X	X	X	
27	TP09_0.5	Mar 19, 2021		Soil	S21-Ma40673				X	X	X	
28	TP09_1.0	Mar 19, 2021		Soil	S21-Ma40674			X		X		
29	QC101	Mar 19, 2021		Soil	S21-Ma40675				X	X	X	
Test Counts						4	2	5	22	27	22	4

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

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

Terms

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

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Comments

The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Authorised by:



General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

Certificate of Analysis

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Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:

Report **782134-S**
Project name HMA
Received Date Mar 22, 2021

Client Sample ID			TP01_0.2	TP01_0.5	TP01_1.0	TP01_2.0
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Ma40647**	**S21-Ma40648**	**S21-Ma40649**	**S21-Ma40650**
Date Sampled			**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	102	95	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-

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Client Sample ID			TP01_0.2	TP01_0.5	TP01_1.0	TP01_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40647	S21-Ma40648	S21-Ma40649	S21-Ma40650
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	82	74	-	-
p-Terphenyl-d14 (surr.)	1	%	89	87	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	123	115	-	-
Tetrachloro-m-xylene (surr.)	1	%	102	101	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	123	115	-	-
Tetrachloro-m-xylene (surr.)	1	%	102	101	-	-

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Client Sample ID			TP01_0.2	TP01_0.5	TP01_1.0	TP01_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40647	S21-Ma40648	S21-Ma40649	S21-Ma40650
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
2-Nitrophenol	1	mg/kg	< 1	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Phenol-d6 (surr.)	1	%	79	74	-	-
Heavy Metals						
Arsenic	2	mg/kg	12	9.2	7.8	5.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	87	77	79	66
Copper	5	mg/kg	28	30	27	19
Lead	5	mg/kg	21	18	14	8.6
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	30	30	34	25
Zinc	5	mg/kg	55	51	50	51
% Moisture	1	%	23	23	13	12
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	-	-	-
13C2-6:2 FTSA (surr.)	1	%	83	-	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	-	-
18O2-PFHxS (surr.)	1	%	78	-	-	-
13C8-PFOS (surr.)	1	%	89	-	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	-	-
13C8-PFOA (surr.)	1	%	84	-	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	-	-

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Client Sample ID			TP02_0.2	TP02_0.5	TP02_2.0	TP03_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40651	S21-Ma40652	S21-Ma40654	S21-Ma40655
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	93	91	93	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	73	78	84	89
p-Terphenyl-d14 (surr.)	1	%	88	83	91	90

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Client Sample ID			TP02_0.2	TP02_0.5	TP02_2.0	TP03_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40651	S21-Ma40652	S21-Ma40654	S21-Ma40655
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	110	104	101	101
Tetrachloro-m-xylene (surr.)	1	%	99	96	103	99
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	110	104	101	101
Tetrachloro-m-xylene (surr.)	1	%	99	96	103	99
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

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Client Sample ID			TP02_0.2	TP02_0.5	TP02_2.0	TP03_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40651	S21-Ma40652	S21-Ma40654	S21-Ma40655
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	64	68	75	85
Heavy Metals						
Arsenic	2	mg/kg	3.9	2.7	2.7	5.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	55	85	91	59
Copper	5	mg/kg	13	19	18	12
Lead	5	mg/kg	20	11	14	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	20	20	12
Zinc	5	mg/kg	31	65	68	31
% Moisture	1	%	12	11	13	9.1
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	-	-	-
13C2-6:2 FTSA (surr.)	1	%	89	-	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	-	-
18O2-PFHxS (surr.)	1	%	82	-	-	-
13C8-PFOS (surr.)	1	%	102	-	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	-	-
13C8-PFOA (surr.)	1	%	88	-	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	-	-

Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-

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Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	108	90	97	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	80	80	79	-
p-Terphenyl-d14 (surr.)	1	%	89	91	89	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-

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Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	103	109	98	-
Tetrachloro-m-xylene (surr.)	1	%	108	109	103	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	103	109	98	-
Tetrachloro-m-xylene (surr.)	1	%	108	109	103	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
Dinoseb	20	mg/kg	< 20	< 20	< 20	-

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Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	-
Phenol-d6 (surr.)	1	%	72	71	74	-
Heavy Metals						
Arsenic	2	mg/kg	3.1	8.9	11	7.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	100	73	99	98
Copper	5	mg/kg	24	27	38	36
Lead	5	mg/kg	12	17	19	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	30	26	42	38
Zinc	5	mg/kg	77	50	65	60
% Moisture	1	%	13	21	22	19

Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	103	109	96	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

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Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	77	77	91	88
p-Terphenyl-d14 (surr.)	1	%	84	83	97	95
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	93	92	111	105
Tetrachloro-m-xylene (surr.)	1	%	98	98	121	114

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Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	93	92	111	105
Tetrachloro-m-xylene (surr.)	1	%	98	98	121	114
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	75	74	79	83
Heavy Metals						
Arsenic	2	mg/kg	12	10	11	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	100	110	120
Copper	5	mg/kg	34	37	42	43
Lead	5	mg/kg	21	21	23	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	32	38	43	44
Zinc	5	mg/kg	54	60	74	77
% Moisture	1	%	18	22	21	21

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Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	-	< 10	-	-
13C2-6:2 FTSA (surr.)	1	%	-	88	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	-	-
18O2-PFHxS (surr.)	1	%	-	88	-	-
13C8-PFOS (surr.)	1	%	-	103	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	-	-
13C8-PFOA (surr.)	1	%	-	89	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	-	-

Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	97	101	100	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

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Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	95	108	103	-
p-Terphenyl-d14 (surr.)	1	%	111	118	104	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	91	100	99	-
Tetrachloro-m-xylene (surr.)	1	%	111	116	103	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

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Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	91	100	99	-
Tetrachloro-m-xylene (surr.)	1	%	111	116	103	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
Dinoseb	20	mg/kg	< 20	< 20	< 20	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	-
Phenol-d6 (surr.)	1	%	74	78	76	-
Heavy Metals						
Arsenic	2	mg/kg	8.2	9.3	10	7.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	100	100	93	100
Copper	5	mg/kg	33	38	37	29
Lead	5	mg/kg	23	21	21	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Nickel	5	mg/kg	35	39	33	30
Zinc	5	mg/kg	62	68	54	43
% Moisture	1	%	21	21	20	19
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	-	-	< 10	-
13C2-6:2 FTSA (surr.)	1	%	-	-	93	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	-	< 5	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	-	< 5	-
18O2-PFHxS (surr.)	1	%	-	-	91	-
13C8-PFOS (surr.)	1	%	-	-	105	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	-	< 5	-

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Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
13C8-PFOA (surr.)	1	%	-	-	87	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	< 5	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	< 5	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	< 5	-

Client Sample ID			TP08_0.2	TP08_0.5	TP08_1.0	TP09_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40669	S21-Ma40670	S21-Ma40671	S21-Ma40672
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	79	93	94	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

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Client Sample ID			TP08_0.2	TP08_0.5	TP08_1.0	TP09_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40669	S21-Ma40670	S21-Ma40671	S21-Ma40672
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	102	102	90	92
p-Terphenyl-d14 (surr.)	1	%	104	102	96	99
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	92	91	55	57
Tetrachloro-m-xylene (surr.)	1	%	107	105	89	93
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	92	91	55	57
Tetrachloro-m-xylene (surr.)	1	%	107	105	89	93

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Client Sample ID			TP08_0.2	TP08_0.5	TP08_1.0	TP09_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40669	S21-Ma40670	S21-Ma40671	S21-Ma40672
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	71	78	75	76
Heavy Metals						
Arsenic	2	mg/kg	14	4.0	4.5	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	44	79	62	53
Copper	5	mg/kg	23	25	27	23
Lead	5	mg/kg	18	18	13	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	19	22	16
Zinc	5	mg/kg	34	64	63	52
% Moisture	1	%	12	17	9.5	11

Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	-	< 50

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Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
BTEX					
Benzene	0.1	mg/kg	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	88	-	63
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	< 100
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	86	-	94
p-Terphenyl-d14 (surr.)	1	%	97	-	99
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05

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Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	-	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	60	-	58
Tetrachloro-m-xylene (surr.)	1	%	90	-	91
Polychlorinated Biphenyls					
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	60	-	58
Tetrachloro-m-xylene (surr.)	1	%	90	-	91
Phenols (Halogenated)					
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1
Pentachlorophenol	1	mg/kg	< 1	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	-	< 5
Dinoseb	20	mg/kg	< 20	-	< 20

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Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
Phenol	0.5	mg/kg	< 0.5	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20
Phenol-d6 (surr.)	1	%	84	-	86
Heavy Metals					
Arsenic	2	mg/kg	5.2	5.2	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	89	79	120
Copper	5	mg/kg	44	29	24
Lead	5	mg/kg	33	28	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	23	23	24
Zinc	5	mg/kg	71	82	81
% Moisture	1	%	15	13	14

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Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Mar 23, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Mar 23, 2021	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Mar 23, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs) - Short	Brisbane	Mar 24, 2021	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	TP01_0.2	Mar 19, 2021		Soil	S21-Ma40647				X	X	X	X
2	TP01_0.5	Mar 19, 2021		Soil	S21-Ma40648	X			X	X	X	
3	TP01_1.0	Mar 19, 2021		Soil	S21-Ma40649			X		X		
4	TP01_2.0	Mar 19, 2021		Soil	S21-Ma40650			X		X		
5	TP02_0.2	Mar 19, 2021		Soil	S21-Ma40651				X	X	X	X
6	TP02_0.5	Mar 19, 2021		Soil	S21-Ma40652				X	X	X	
7	TP02_1.0	Mar 19, 2021		Soil	S21-Ma40653		X					
8	TP02_2.0	Mar 19, 2021		Soil	S21-Ma40654				X	X	X	
9	TP03_0.2	Mar 19, 2021		Soil	S21-Ma40655				X	X	X	
10	TP03_0.5	Mar 19, 2021		Soil	S21-Ma40656				X	X	X	

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6 Monterey Road
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Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
11	TP04_0.2	Mar 19, 2021		Soil	S21-Ma40657				X	X	X	
12	TP04_0.5	Mar 19, 2021		Soil	S21-Ma40658	X			X	X	X	
13	TP04_1.0	Mar 19, 2021		Soil	S21-Ma40659			X		X		
14	TP05_0.2	Mar 19, 2021		Soil	S21-Ma40660				X	X	X	
15	TP05_0.5	Mar 19, 2021		Soil	S21-Ma40661				X	X	X	X
16	TP05_1.0	Mar 19, 2021		Soil	S21-Ma40662		X					
17	TP06_0.2	Mar 19, 2021		Soil	S21-Ma40663				X	X	X	
18	TP06_0.5	Mar 19, 2021		Soil	S21-Ma40664				X	X	X	
19	TP06_1.0	Mar 19, 2021		Soil	S21-Ma40665				X	X	X	
20	TP07_0.2	Mar 19, 2021		Soil	S21-Ma40666				X	X	X	
21	TP07_0.5	Mar 19, 2021		Soil	S21-Ma40667				X	X	X	X

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Phone : 0800 856 450
IANZ # 1290

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone: 08 8338 1009
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name: John O'Brien

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
22	TP07_1.0	Mar 19, 2021		Soil	S21-Ma40668			X		X		
23	TP08_0.2	Mar 19, 2021		Soil	S21-Ma40669				X	X	X	
24	TP08_0.5	Mar 19, 2021		Soil	S21-Ma40670	X			X	X	X	
25	TP08_1.0	Mar 19, 2021		Soil	S21-Ma40671				X	X	X	
26	TP09_0.2	Mar 19, 2021		Soil	S21-Ma40672				X	X	X	
27	TP09_0.5	Mar 19, 2021		Soil	S21-Ma40673				X	X	X	
28	TP09_1.0	Mar 19, 2021		Soil	S21-Ma40674			X		X		
29	QC101	Mar 19, 2021		Soil	S21-Ma40675				X	X	X	
Test Counts						4	2	5	22	27	22	4

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

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

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

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	90			70-130	Pass	
TRH C10-C14	%	85			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	98			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	100			70-130	Pass	
m&p-Xylenes	%	99			70-130	Pass	
o-Xylene	%	100			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	78			70-130	Pass	
TRH C6-C10	%	91			70-130	Pass	
TRH >C10-C16	%	84			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	97			70-130	Pass	
Benz(a)anthracene	%	90			70-130	Pass	
Benzo(a)pyrene	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	%	87			70-130	Pass	
Benzo(g.h.i)perylene	%	84			70-130	Pass	
Benzo(k)fluoranthene	%	90			70-130	Pass	
Chrysene	%	93			70-130	Pass	
Dibenz(a.h)anthracene	%	94			70-130	Pass	
Fluoranthene	%	89			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	91			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Phenanthrene	%	102			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	112			70-130	Pass	
4.4'-DDD	%	130			70-130	Pass	
4.4'-DDE	%	86			70-130	Pass	
4.4'-DDT	%	73			70-130	Pass	
a-BHC	%	78			70-130	Pass	
Aldrin	%	93			70-130	Pass	
b-BHC	%	83			70-130	Pass	
d-BHC	%	70			70-130	Pass	
Dieldrin	%	120			70-130	Pass	
Endosulfan I	%	117			70-130	Pass	
Endosulfan II	%	123			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	81			70-130	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	%	130			70-130	Pass	
Endrin ketone	%	80			70-130	Pass	
g-BHC (Lindane)	%	70			70-130	Pass	
Heptachlor	%	83			70-130	Pass	
Heptachlor epoxide	%	123			70-130	Pass	
Hexachlorobenzene	%	75			70-130	Pass	
Methoxychlor	%	73			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	81			70-130	Pass	
Aroclor-1260	%	85			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	101			30-130	Pass	
2.4-Dichlorophenol	%	112			30-130	Pass	
2.4.5-Trichlorophenol	%	124			30-130	Pass	
2.4.6-Trichlorophenol	%	122			30-130	Pass	
2.6-Dichlorophenol	%	118			30-130	Pass	
4-Chloro-3-methylphenol	%	112			30-130	Pass	
Pentachlorophenol	%	76			30-130	Pass	
Tetrachlorophenols - Total	%	112			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Methyl-4.6-dinitrophenol	%	76			30-130	Pass	
2-Methylphenol (o-Cresol)	%	89			30-130	Pass	
2-Nitrophenol	%	84			30-130	Pass	
2.4-Dimethylphenol	%	96			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	107			30-130	Pass	
4-Nitrophenol	%	118			30-130	Pass	
Dinoseb	%	98			30-130	Pass	
Phenol	%	95			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	92			80-120	Pass	
Cadmium	%	95			80-120	Pass	
Chromium	%	98			80-120	Pass	
Copper	%	99			80-120	Pass	
Lead	%	96			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	92			80-120	Pass	
LCS - % Recovery							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	72			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	92			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	99			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	86			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Benzo(g.h.i)perylene	S21-Ma32859	NCP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	S21-Ma32859	NCP	%	80			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ma32859	NCP	%	80			70-130	Pass	
Spike - % Recovery									

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Organochlorine Pesticides				Result 1					
4.4'-DDT	S21-Ma32822	NCP	%	86			70-130	Pass	
Endrin aldehyde	S21-Ma32822	NCP	%	90			70-130	Pass	
Methoxychlor	S21-Ma32822	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S21-Ma33182	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2.4-Dichlorophenol	S21-Ma32859	NCP	%	83			30-130	Pass	
2.4.6-Trichlorophenol	S21-Ma32859	NCP	%	79			30-130	Pass	
2.6-Dichlorophenol	S21-Ma32859	NCP	%	76			30-130	Pass	
4-Chloro-3-methylphenol	S21-Ma32859	NCP	%	96			30-130	Pass	
Pentachlorophenol	S21-Ma32859	NCP	%	94			30-130	Pass	
Tetrachlorophenols - Total	S21-Ma32859	NCP	%	92			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S21-Ma32859	NCP	%	91			30-130	Pass	
2-Methyl-4.6-dinitrophenol	S21-Ma32859	NCP	%	91			30-130	Pass	
2-Methylphenol (o-Cresol)	S21-Ma32859	NCP	%	70			30-130	Pass	
2-Nitrophenol	S21-Ma32859	NCP	%	86			30-130	Pass	
2.4-Dinitrophenol	S21-Ma32859	NCP	%	89			70-130	Pass	
4-Nitrophenol	S21-Ma32859	NCP	%	95			30-130	Pass	
Dinoseb	S21-Ma32859	NCP	%	98			30-130	Pass	
Spike - % Recovery									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1					
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Ma37897	NCP	%	77			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Ma37897	NCP	%	88			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Ma37897	NCP	%	88			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Ma37897	NCP	%	76			50-150	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S21-Ma40656	CP	%	70			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Ma40656	CP	%	78			70-130	Pass	
Toluene	S21-Ma40656	CP	%	82			70-130	Pass	
Ethylbenzene	S21-Ma40656	CP	%	79			70-130	Pass	
m&p-Xylenes	S21-Ma40656	CP	%	77			70-130	Pass	
o-Xylene	S21-Ma40656	CP	%	79			70-130	Pass	
Xylenes - Total*	S21-Ma40656	CP	%	78			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S21-Ma40656	CP	%	123			70-130	Pass	
TRH C6-C10	S21-Ma40656	CP	%	70			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S21-Ma40658	CP	%	77			70-130	Pass	
Acenaphthylene	S21-Ma40658	CP	%	76			70-130	Pass	
Anthracene	S21-Ma40658	CP	%	83			70-130	Pass	
Benz(a)anthracene	S21-Ma40658	CP	%	71			70-130	Pass	
Benzo(a)pyrene	S21-Ma40658	CP	%	78			70-130	Pass	

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	S21-Ma40658	CP	%	78			70-130	Pass	
Benzo(k)fluoranthene	S21-Ma40658	CP	%	87			70-130	Pass	
Chrysene	S21-Ma40658	CP	%	74			70-130	Pass	
Fluoranthene	S21-Ma40658	CP	%	78			70-130	Pass	
Fluorene	S21-Ma40658	CP	%	81			70-130	Pass	
Naphthalene	S21-Ma40658	CP	%	76			70-130	Pass	
Phenanthrene	S21-Ma40658	CP	%	75			70-130	Pass	
Pyrene	S21-Ma40658	CP	%	79			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S21-Ma40658	CP	%	88			70-130	Pass	
4.4'-DDD	S21-Ma40658	CP	%	82			70-130	Pass	
4.4'-DDE	S21-Ma40658	CP	%	90			70-130	Pass	
a-BHC	S21-Ma40658	CP	%	79			70-130	Pass	
Aldrin	S21-Ma40658	CP	%	89			70-130	Pass	
b-BHC	S21-Ma40658	CP	%	79			70-130	Pass	
d-BHC	S21-Ma40658	CP	%	79			70-130	Pass	
Dieldrin	S21-Ma40658	CP	%	93			70-130	Pass	
Endosulfan I	S21-Ma40658	CP	%	85			70-130	Pass	
Endosulfan II	S21-Ma40658	CP	%	80			70-130	Pass	
Endosulfan sulphate	S21-Ma40658	CP	%	79			70-130	Pass	
Endrin	S21-Ma40658	CP	%	74			70-130	Pass	
Endrin ketone	S21-Ma40658	CP	%	80			70-130	Pass	
g-BHC (Lindane)	S21-Ma40658	CP	%	88			70-130	Pass	
Heptachlor	S21-Ma40658	CP	%	78			70-130	Pass	
Heptachlor epoxide	S21-Ma40658	CP	%	85			70-130	Pass	
Hexachlorobenzene	S21-Ma40658	CP	%	86			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S21-Ma40658	CP	%	92			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S21-Ma40658	CP	%	74			30-130	Pass	
2.4.5-Trichlorophenol	S21-Ma40658	CP	%	71			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2.4-Dimethylphenol	S21-Ma40658	CP	%	72			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Ma40658	CP	%	83			30-130	Pass	
Phenol	S21-Ma40658	CP	%	74			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Ma40661	CP	%	104			75-125	Pass	
Cadmium	S21-Ma40661	CP	%	110			75-125	Pass	
Chromium	S21-Ma40661	CP	%	112			75-125	Pass	
Copper	S21-Ma40661	CP	%	102			75-125	Pass	
Lead	S21-Ma40661	CP	%	103			75-125	Pass	
Mercury	S21-Ma40661	CP	%	111			75-125	Pass	
Nickel	S21-Ma40661	CP	%	107			75-125	Pass	
Zinc	S21-Ma40661	CP	%	109			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S21-Ma40669	CP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C10-C16	S21-Ma40669	CP	%	87			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Ma40672	CP	%	107			75-125	Pass	
Cadmium	S21-Ma40672	CP	%	110			75-125	Pass	
Chromium	S21-Ma40672	CP	%	96			75-125	Pass	
Copper	S21-Ma40672	CP	%	104			75-125	Pass	
Lead	S21-Ma40672	CP	%	107			75-125	Pass	
Mercury	S21-Ma40672	CP	%	114			75-125	Pass	
Nickel	S21-Ma40672	CP	%	100			75-125	Pass	
Zinc	S21-Ma40672	CP	%	97			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	S21-Ma32682	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S21-Ma40267	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Ma37886	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Ma37886	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Ma37886	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Ma37886	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma40649	CP	mg/kg	7.8	6.4	19	30%	Pass	
Cadmium	S21-Ma40649	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma40649	CP	mg/kg	79	72	9.0	30%	Pass	
Copper	S21-Ma40649	CP	mg/kg	27	31	13	30%	Pass	
Lead	S21-Ma40649	CP	mg/kg	14	12	16	30%	Pass	
Mercury	S21-Ma40649	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma40649	CP	mg/kg	34	37	10	30%	Pass	
Zinc	S21-Ma40649	CP	mg/kg	50	56	11	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Ma40655	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Ma40655	CP	mg/kg	< 50	< 50	<1	30%	Pass	

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Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Ma40655	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Ma40655	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S21-Ma40655	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Ma40655	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Ma40655	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S21-Ma40655	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

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Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Ma40655	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Ma40655	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Ma40655	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S21-Ma40655	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Ma40655	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Ma40655	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Ma40657	CP	%	21	19	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma40660	CP	mg/kg	12	9.2	29	30%	Pass	
Cadmium	S21-Ma40660	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma40660	CP	mg/kg	130	89	35	30%	Fail	Q15
Copper	S21-Ma40660	CP	mg/kg	34	34	1.0	30%	Pass	
Lead	S21-Ma40660	CP	mg/kg	21	18	13	30%	Pass	
Mercury	S21-Ma40660	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma40660	CP	mg/kg	32	35	12	30%	Pass	
Zinc	S21-Ma40660	CP	mg/kg	54	59	9.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Ma40668	CP	%	19	20	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma40671	CP	mg/kg	4.5	4.9	7.0	30%	Pass	
Cadmium	S21-Ma40671	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma40671	CP	mg/kg	62	76	20	30%	Pass	
Copper	S21-Ma40671	CP	mg/kg	27	33	18	30%	Pass	
Lead	S21-Ma40671	CP	mg/kg	13	15	8.0	30%	Pass	
Mercury	S21-Ma40671	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma40671	CP	mg/kg	22	34	44	30%	Fail	Q15
Zinc	S21-Ma40671	CP	mg/kg	63	76	18	30%	Pass	

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Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Analytical Services Manager
Senior Analyst-Organic (NSW)
Senior Analyst-Metal (NSW)
Senior Analyst-PFAS (QLD)

General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

CHAIN OF CUSTODY RECORD

☑ Sydney Laboratory — Unit 17 Dal F, 16 Mars Rd, Lane Cove West, NSW 2066 — 02 9900 8400 — EnviroSamplesNSW@eurofins.com
☐ Brisbane Laboratory — Unit 1, 11 Smallwood Pl, Murarrie, QLD 4172 — 07 3902 4600 — EnviroSamplesQLD@eurofins.com
☐ Perth Laboratory — Unit 2, 91 Leach Highway, Kewdale WA 6105 — 08 9251 9600 — EnviroSamplesWA@eurofins.com
☐ Melbourne Laboratory — 2 Kingston Town Close, Oakleigh, VIC 3166 — 03 8564 5000 — EnviroSamplesVic@eurofins.com

Company	Agon	Project No	-
Address	4/10 Kennedy St Kingston	Project Name	HMA
Contact Name		Project Manager	JO
Phone No		EDD Format (ESdat, EQuIS, Casiope)	ESDAT
Special Directions	Reagent Water ASLP Passed through 0.1 micro filter prior to analysis	Sampler(s)	OF/DO
Purchase Order		Handed over by	J.O
Quote ID No.	Quote/box # 190125AEGA	Email for Invoice	@agonenviro.com.au; finance@agonenviro.com.au;
		Email for Results	@agonenviro.com.au

Analytes (Tick/Write in the Boxes Below to Indicate Requested Analytes)

No	Client Sample ID	Sampled Date/Time (Mandatory for Waters)	Matrix (Soil = S, Water = W)	8 Metals	8B Soils (8 Metals, No Thallium or Cyanide) - See Special Instructions	Asbestos ID	PFAS Standard LOR	ASLP Hexavalent Chromium
1	TP01_0.2	19.3.21	S					X
2	TP01_0.5	19.3.21	S					
3	TP01_1.0	19.3.21	S					
4	TP01_2.0	19.3.21	S					
5	TP02_0.2	19.3.21	S					X
6	TP02_0.5	19.3.21	S					
7	TP02_1.0	19.3.21	S					
8	TP02_2.0	19.3.21	S					
9	TP03_0.2	19.3.21	S					
10	TP03_0.5	19.3.21	S					X
11	TP04_0.2	19.3.21	S					
12	TP04_0.5	19.3.21	S					
13	TP04_1.0	19.3.21	S					
14	TP05_0.2	19.3.21	S					X
15	TP05_0.5	19.3.21	S					
16	TP05_1.0	19.3.21	S					
17	TP06_0.2	19.3.21	S					
18	TP06_0.5	19.3.21	S					
19	TP06_1.0	19.3.21	S					
20	TP07_0.2	19.3.21	S					X
21	TP07_0.5	19.3.21	S					
22	TP07_1.0	19.3.21	S					
23	TP08_0.2	19.3.21	S					
24	TP08_0.5	19.3.21	S					
25	TP08_1.0	19.3.21	S					
26	TP09_0.2	19.3.21	S					X
27	TP09_0.5	19.3.21	S					
28	TP09_1.0	19.3.21	S					
29	QC101	19.3.21	S					
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
	Total Counts							5

Containers

Vol / Container	Preservative	Bag/500mL Amber	Bag/Amber Sterile	Small Glass 125mL	Vial/Septum Vial	Plastic 500mL (unpreserved)	Amber/Glass Jar (unpreserved)

Turnaround Time (TAT) Requirements (Subject to availability - please contact ES prior to confirming all TATs)

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

Relinquished Comments / Dangerous Goods Hazard Warning

Method of Shipment	☐ Courier (Consignment No.)		☐ Postal	Name		Date	Time
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW		Date 21/3/2021	Time 12:30	Temperature 21.2°C
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW		Date	Time	Report No 683955

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

Certificate of Analysis

eurofins | Environment Testing

Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:

Report **783755-L**
Project name ADDITIONAL: HMA
Received Date Mar 29, 2021

Client Sample ID			**TP01_0.2**	**TP02_0.2**	**TP03_0.5**	**TP05_0.2**
Sample Matrix			**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**
Eurofins Sample No.			**S21-Ma53470**	**S21-Ma53471**	**S21-Ma53472**	**S21-Ma53473**
Date Sampled			**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**
Test/Reference	LOR	Unit				
Chromium (hexavalent)	0.005	mg/L	0.006	0.006	0.005	0.005
AUS Leaching Procedure						
Leachate Fluid[C01]		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	6.6	6.6	6.8	6.6
pH (Leachate fluid)	0.1	pH Units	6.3	6.3	6.3	6.3
pH (off)	0.1	pH Units	6.5	6.9	6.9	6.2

Client Sample ID			**TP07_0.2**	**TP09_0.2**
Sample Matrix			**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**
Eurofins Sample No.			**S21-Ma53474**	**S21-Ma53475**
Date Sampled			**Mar 19, 2021**	**Mar 19, 2021**
Test/Reference	LOR	Unit		
Chromium (hexavalent)	0.005	mg/L	< 0.005	0.011
AUS Leaching Procedure				
Leachate Fluid[C01]		comment	4.0	4.0
pH (initial)	0.1	pH Units	6.6	6.8
pH (Leachate fluid)	0.1	pH Units	6.3	6.3
pH (off)	0.1	pH Units	6.5	6.9

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Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Chromium (hexavalent)	Sydney	Mar 30, 2021	28 Days
- Method: In-house method E057.2			
AUS Leaching Procedure	Sydney	Mar 30, 2021	7 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

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

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Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

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

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: ADDITIONAL: HMA

Order No.:
Report #: 783755
Phone:
Fax:

Received: Mar 29, 2021 1:31 PM
Due: Mar 31, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Chromium (hexavalent)	AUS Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	TP01_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53470	X	X
2	TP02_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53471	X	X
3	TP03_0.5	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53472	X	X
4	TP05_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53473	X	X

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

Australia

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: ADDITIONAL: HMA

Order No.:
Report #: 783755
Phone:
Fax:

Received: Mar 29, 2021 1:31 PM
Due: Mar 31, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Chromium (hexavalent)	AUS Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory							
External Laboratory							
5	TP07_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53474	X	X
6	TP09_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53475	X	X
Test Counts						6	6

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

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

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

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	S21-Ma53471	CP	%	79			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	S21-Ma53470	CP	mg/L	0.006	0.006	11	30%	Pass	

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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
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised by:

Analytical Services Manager
Senior Analyst-Inorganic (NSW)

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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Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab
Project Name:	Jerrabomberra	**Order Number**	
Project Manager:	[redacted]	**Sampler:** [redacted]	**Attn:** [redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]	**Phone:** 612 9910 6200
Date Required:	Standard ☐		**Email:** [redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

Sample ID	Lab ID	Date Sampled	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Clay			Notes/preservation
Bore 1/0.1	1	11/08/20	S	G	x									
Bore 1/0.5	2	18/08/20	S	G		x								
Bore 1/1.0	3	18/08/20	S	G		x								
Bore 2/0.1	4	04/08/20	S	G	x									
Bore 2/0.5	5	04/08/20	S	G	x									
Bore 2/1.0	6	04/08/20	S	G		x					x			
Bore 2/2.0	7	04/08/20	S	G		x								
Bore 2/3.0	8	04/08/20	S	G		x								
Bore 2/4.0	9	04/08/20	S	G		x								
Bore 2/5.0	10	04/08/20	S	G		x								
Bore3/0.1	11	06/08/20	S	G	x									
Bore 3/0.5	12	06/08/20	S	G		x								
Bore 3/1.0	13	06/08/20	S	G		x								
Bore 4/0.1	14	06/08/20	S	G	x									
Bore 4/0.5	15	06/08/20	S	G										
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address:** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 249251

Date Received: 14/08/2020
Time Received: 5:09pm
Received By: [redacted]
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

received 18/08/2020

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 4/1.0	16	04/08/20	S	G		x								
Bore 4/2.0	17	04/08/20	S	G		x								
Bore 4/3.0	18	04/08/20	S	G	x	x	add 20.1915							
Bore 4/4.0	NR	04/08/20	S	G	x									
Bore 5/0.1	19	06/08/20	S	G	x									
Bore 5/0.5	20	06/08/20	S	G		x								
Bore 5/1.0	21	06/08/20	S	G		x								
Bore 6/0.1	22	04/08/20	S	G	x									
Bore 6/0.5	23	04/08/20	S	G		x								
Bore 6/1.0	24	04/08/20	S	G	x	x								
Bore 6/2.0	25	04/08/20	S	G		x								
Bore 6/3.0	26	04/08/20	S	G		x								
Bore 6/4.0	27	04/08/20	S	G		x								
Bore 6/5.0	28	04/08/20	S	G		x								
Bore 6/6.0	29	04/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** SDG | **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd | **Address:** [redacted]@douglaspartners.com.au | **Phone:** | **Fax:**

Signed: | **Received by:** | **Date & Time:**

249251

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]		**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 7/0.1	30	11/08/20	S	G	x	x								
Bore 7/0.5	31	11/08/20	S	G		x								
Bore 7/1.0	32	11/08/20	S	G		x								
Bore 8/0.1	33	04/08/20	S	G	x									
Bore 8/0.5	34	04/08/20	S	G		x								
Bore 8/1.0	35	04/08/20	S	G		x								
Bore 8/2.0	36	04/08/20	S	G		x								
Bore 8/3.0	37	04/08/20	S	G		x								
Bore 8/4.0	38	04/08/20	S	G		x								
Bore 8/5.0	39	04/08/20	S	G		x								
Bore 9/0.1	40	06/08/20	S	G	x									
Bore 9/0.5	41	06/08/20	S	G	x									
Bore 9/1.0	42	06/08/20	S	G		x								
Bore 10/0.1	43	04/08/20	S	G	x									
Bore 10/0.5	44	04/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]uglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

249251

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 10/1.0	45	04/08/20	S	G	x						x			
Bore 10/2.0	46	04/08/20	S	G		x								
Bore 10/3.0	47	04/08/20	S	G		x								
Bore 10/4.0	48	04/08/20	S	G		x								
Bore 11/0.1	49	07/08/20	S	G	x									
Bore 11/0.5	50	07/08/20	S	G		x								
Bore 11/1.0	51	07/08/20	S	G		x								
Bore 12/0.1	52	11/08/20	S	G	x									
Bore 12/0.5	53	11/08/20	S	G		x								
Bore 12/1.0	54	11/08/20	S	G		x								
Bore 13/0.1	55	05/08/20	S	G	x									
Bore 13/0.5	56	05/08/20	S	G		x								
Bore 13/1.0	57	05/08/20	S	G		x								
Bore 13/2.0	58	05/08/20	S	G		x								
Bore 13/3.0	59	05/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]@hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 13/4.0	60	05/08/20	S	G	x									
Bore 13/5.0	61	05/08/20	S	G		x								
Bore 14/0.1	62	05/08/20	S	G	x									
Bore 14/0.5	63	05/08/20	S	G		x								
Bore 14/1.0	64	05/08/20	S	G		x								
Bore 14/2.0	65	05/08/20	S	G		x								
Bore 14/3.0	66	05/08/20	S	G										
Bore 14/4.0	67	05/08/20	S	G										
Bore 14/5.0	68	05/08/20	S	G										
Bore 14/6.0	69	05/08/20	S	G										
Bore 15/0.1	70	05/08/20	S	G	x									
Bore 15/0.5	71	05/08/20	S	G	x									
Bore 15/1.0	72	05/08/20	S	G		x								
Bore 15/2.0	73	05/08/20	S	G		x								
Bore 15/3.0	74	05/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** SDG | **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd | **Address:** [redacted]@douglaspartners.com.au | **Phone:** | **Fax:**

Signed: | **Received by:** | **Date & Time:**

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: COMB. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 15/4.0	75	05/08/20	S	G		x								
Bore 16/0.1	76	05/08/20	S	G	x									
Bore 16/0.5	77	05/08/20	S	G		x								
Bore 16/1.0	78	05/08/20	S	G		x								
Bore 16/2.0	79	05/08/20	S	G		x								
Bore 16/3.0	80	05/08/20	S	G		x								
Bore 16/4.0	81	05/08/20	S	G		x								
Bore 16/5.0	82	05/08/20	S	G		x								
Bore 17/0.1	83	10/08/20	S	G	x									
Bore 17/0.5	84	10/08/20	S	G		x								
Bore 17/1.0	85	10/08/20	S	G	x									
Bore 18/0.1	86	10/08/20	S	G	x									
Bore 18/0.5	87	10/08/20	S	G		x								
Bore 18/1.0	88	10/08/20	S	G		x								
TB1	89	04/08/20	S	G			x							
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, C			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
M1	—	05/08/20	M	P				x						To be sent on Monday
M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
RR5	—	11/08/20	S	G	x									Please send to third party lab
RR6	—	11/08/20	S	G	x									Please send to third party lab
RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 19/0.1	100	05/08/20	S	G	x									
Bore 19/0.5	101	05/08/20	S	G							x			
Bore 19/1.0	102	05/08/20	S	G		x								
Bore 19/2.0	103	05/08/20	S	G	x									
Bore 19/3.0	104	05/08/20	S	G		x								
Bore 19/4.0	105	05/08/20	S	G		x								
Bore 19/5.0	106	05/08/20	S	G										
R1	107					x								
R2	108					x								
R3	109					x								
R4	110					x								
TS1 1/8	111						x	asbestos 2918						
TB4 6/8	112						x							
TB4 6/8	113						x							
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

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PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:		**Relinquished by:**	SDG	**Transported to laboratory by:**	TNT
Send Results to:	Douglas Partners Pty Ltd	**Address:**	[redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:		**Received by:**		**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Date Sampled	Sample Type: S - soil, W - water	Container Type: G - glass, P - plastic	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 1/0.1	1	11/08/20	S	P	x									
Bore 1/0.5	2	18/08/20	S	P		x								
Bore 1/1.0	3	18/08/20	S	P		x								
Bore 2/0.1	4	04/08/20	S	P		x								
Bore 2/0.5	5	04/08/20	S	P		x								
Bore 2/1.0	6	04/08/20	S	P		x								
Bore 2/2.0	7	04/08/20	S	P		x								
Bore 2/3.0	8	04/08/20	S	P		x								
Bore 2/4.0	9	04/08/20	S	P		x								
Bore 2/5.0	10	04/08/20	S	P		x								
Bore3/0.1	11	06/08/20	S	P		x								
Bore 3/0.5	12	06/08/20	S	P		x								
Bore 3/1.0	13	06/08/20	S	P	x									
Bore 4/0.1	14	06/08/20	S	P		x								
Bore 4/0.5	15	06/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]douglaspartners.com.au	[redacted]	@hotmail.com.au	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold							Notes/preservation
Bore 4/1.0	16	04/08/20	S	P		x							
Bore 4/2.0	17	04/08/20	S	P		x							
Bore 4/3.0	18	04/08/20	S	P		x							
Bore 4/4.0	NR	04/08/20	S	P		x							
Bore 5/0.1	19	06/08/20	S	P		x							
Bore 5/0.5	20	06/08/20	S	P		x							
Bore 5/1.0	21	06/08/20	S	P		x							
Bore 6/0.1	22	04/08/20	S	P		x							
Bore 6/0.5	23	04/08/20	S	P		x							
Bore 6/1.0	24	04/08/20	S	P		x							
Bore 6/2.0	25	04/08/20	S	P	x								
Bore 6/3.0	26	04/08/20	S	P		x							
Bore 6/4.0	27	04/08/20	S	P		x							
Bore 6/5.0	28	04/08/20	S	P		x							
Bore 6/6.0	29	04/08/20	S	P		x							
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:		**Relinquished by:**	SDG	**Transported to laboratory by:**	TNT
Send Results to:	Douglas Partners Pty Ltd	**Address:**	[redacted]douglaspartners.com.au	**Phone:**	**Fax:**
Signed:		**Received by:**		**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 7/0.1	30	11/08/20	S	P		x								
Bore 7/0.5	31	11/08/20	S	P	x									
Bore 7/1.0	32	11/08/20	S	P		x								
Bore 8/0.1	33	04/08/20	S	P		x								
Bore 8/0.5	34	04/08/20	S	P		x								
Bore 8/1.0	35	04/08/20	S	P		x								
Bore 8/2.0	36	04/08/20	S	P		x								
Bore 8/3.0	37	04/08/20	S	P		x								
Bore 8/4.0	38	04/08/20	S	P		x								
Bore 8/5.0	39	04/08/20	S	P	x									
Bore 9/0.1	40	06/08/20	S	P		x								
Bore 9/0.5	41	06/08/20	S	P		x								
Bore 9/1.0	42	06/08/20	S	P		x								
Bore 10/0.1	43	04/08/20	S	P		x								
Bore 10/0.5	44	04/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No: 103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab	
Project Name: Jerrabomberra	**Order Number**		
Project Manager: [redacted]	**Sampler:** [redacted]	**Attn:** [redacted]	
Emails: [redacted]@douglaspartners.com.au		**Phone:** 612 9910 6200	
Date Required: Standard ☐		**Email:** [redacted]@envirolab.com.au	
Prior Storage: ☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

	Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
45	Bore 10/1.0	44	04/08/20	S	P		x								
46	Bore 10/2.0	45	04/08/20	S	P	x									
47	Bore 10/3.0	46	04/08/20	S	P		x								
48	Bore 10/4.0	47	04/08/20	S	P		x								
49	Bore 11/0.1	48	07/08/20	S	P		x								
50	Bore 11/0.5	49	07/08/20	S	P		x								
51	Bore 11/1.0	50	07/08/20	S	P		x								
52	Bore 12/0.1	51	11/08/20	S	P	x									
53	Bore 12/0.5	52	11/08/20	S	P		x								
54	Bore 12/1.0	53	11/08/20	S	P		x								
55	Bore 13/0.1	54	05/08/20	S	P		x								
56	Bore 13/0.5	55	05/08/20	S	P		x								
57	Bore 13/1.0	56	05/08/20	S	P		x								
58	Bore 13/2.0	57	05/08/20	S	P		x								
59	Bore 13/3.0	58	05/08/20	S	P		x								
	PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 13/4.0	60	05/08/20	S	P		x								
Bore 13/5.0	61	05/08/20	S	P		x								
Bore 14/0.1	62	05/08/20	S	P		x								
Bore 14/0.5	63	05/08/20	S	P		x								
Bore 14/1.0	64	05/08/20	S	P		x								
Bore 14/2.0	65	05/08/20	S	P		x								
Bore 14/3.0	66	05/08/20	S	P		x								
Bore 14/4.0	67	05/08/20	S	P		x								
Bore 14/5.0	68	05/08/20	S	P	x									
Bore 14/6.0	69	05/08/20	S	P		x								
Bore 15/0.1	70	05/08/20	S	P		x								
Bore 15/0.5	71	05/08/20	S	P		x								
Bore 15/1.0	72	05/08/20	S	P		x								
Bore 15/2.0	73	05/08/20	S	P		x								
Bore 15/3.0	74	05/08/20	S	P		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:		**Relinquished by:**	SDG	**Transported to laboratory by:**	TNT
Send Results to:	Douglas Partners Pty Ltd	**Address:**	[redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:		**Received by:**		**Date & Time:**	

24925 1

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold		Asbestos ID						Notes/preservation
Bore 15/4.0	75	05/08/20	S	P		x								
Bore 16/0.1	76	05/08/20	S	P		x								
Bore 16/0.5	77	05/08/20	S	P		x								
Bore 16/1.0	78	05/08/20	S	P		x								
Bore 16/2.0	79	05/08/20	S	P		x								
Bore 16/~~3.0~~ 2.5	80	05/08/20	S	P		x								
Bore 16/4.0	81	05/08/20	S	P		x								
Bore 16/5.0	82	05/08/20	S	P		x								
Bore 17/0.1	83	10/08/20	S	P		x								
Bore 17/0.5	84	10/08/20	S	P		x								
Bore 17/1.0	85	10/08/20	S	P	x									
Bore 18/0.1	86	10/08/20	S	P		x								
Bore 18/0.5	87	10/08/20	S	P		x								
Bore 18/1.0	88	10/08/20	S	P		x								
R5	89	11/08/20	S	P		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

249251

[redacted]

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold							Notes/preservation
R6	98	11/08/20		P		x							
R7	99	11/08/20		P		x							
RR5	—	11/08/20		P		x							Please send to third party lab
RR6	—	11/08/20		P		x							Please send to third party lab
RR7	—	11/08/20		P		x							Please send to third party lab
R1	107			P		x							
R2	108			P		x							
R3	109			P		x							
R4	110			P		x							
Bore 19/0.1	100	05/08/20	S	P	x								
Bore 19/0.5	101	05/08/20	S	P		x							
Bore 19/1.0	102	05/08/20	S	P		x							
Bore 19/2.0	103	05/08/20	S	P		x							
Bore 19/3.0	104	05/08/20	S	P		x							
Bore 19/4.0	105	05/08/20	S	P		x							
PQL (S) mg/kg												**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

24925)

Envirolab Services Pty Ltd
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customerservice@envirolab.com.au
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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Canberra
Attention	

Sample Login Details

Your reference	103028.01, Jerrabomberra
Envirolab Reference	249251
Date Sample Received	14/08/2020
Date Instructions Received	19/08/2020
Date Results Expected to be Reported	25/08/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	109 soil, 1 18, 3 water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: @envirolab.com.au	**Email: @envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 1-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 1-0.5																✓
Bore 1-1.0																✓
Bore 2-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 2-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 2-1.0											✓	✓	✓			
Bore 2-2.0																✓
Bore 2-3.0																✓
Bore 2-4.0																✓
Bore 2-5.0																✓
Bore 3-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 3-0.5																✓
Bore 3-1.0										✓						
Bore 4-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 4-0.5																✓
Bore 4-1.0																✓
Bore 4-2.0																✓
Bore 4-3.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 5-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 5-0.5																✓
Bore 5-1.0																✓
Bore 6-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 6-0.5																✓
Bore 6-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 6-2.0										✓						
Bore 6-3.0																✓
Bore 6-4.0																✓
Bore 6-5.0																✓
Bore 6-6.0																✓
Bore 7-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 7-0.5										✓						
Bore 7-1.0																✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 8-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 8-0.5																✓
Bore 8-1.0																✓
Bore 8-2.0																✓
Bore 8-3.0																✓
Bore 8-4.0																✓
Bore 8-5.0										✓						
Bore 9-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 9-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 9-1.0																✓
Bore 10-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 10-0.5																✓
Bore 10-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓			
Bore 10-2.0										✓						
Bore 10-3.0																✓
Bore 10-4.0																✓
Bore 11-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 11-0.5																✓
Bore 11-1.0																✓
Bore 12-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 12-0.5																✓
Bore 12-1.0																✓
Bore 13-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 13-0.5																✓
Bore 13-1.0																✓
Bore 13-2.0																✓
Bore 13-3.0																✓
Bore 13-4.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 13-5.0																✓
Bore 14-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 14-0.5																✓
Bore 14-1.0																✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 14-2.0																✓
Bore 14-3.0																✓
Bore 14-4.0																✓
Bore 14-5.0										✓						
Bore 14-6.0																✓
Bore 15-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 15-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 15-1.0																✓
Bore 15-2.0																✓
Bore 15-3.0																✓
Bore 15-4.0																✓
Bore 16-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 16-0.5																✓
Bore 16-1.0																✓
Bore 16-2.0																✓
Bore 16-3.0																✓
Bore 16-4.0																✓
Bore 16-5.0																✓
Bore 17-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 17-0.5																✓
Bore 17-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 18-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 18-0.5																✓
Bore 18-1.0																✓
TB1	✓	✓														
TS2	✓															
TB2	✓	✓														
TS3	✓															
TB3	✓	✓														
RIN1														✓	✓	
RIN2														✓	✓	
RIN3														✓	✓	

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
R5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
R6	✓	✓	✓	✓	✓	✓	✓	✓	✓							
R7																✓
Bore 19-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 19-0.5											✓	✓	✓			
Bore 19-1.0																✓
Bore 19-2.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 19-3.0																✓
Bore 19-4.0																✓
Bore 19-5.0																✓
R1																✓
R2																✓
R3																✓
R4																✓
TS1	✓															
TS4	✓															
TB4	✓	✓														

The '✓' 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.

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CERTIFICATE OF ANALYSIS 249251

Client Details

Client	Douglas Partners Canberra
Attention	
Address	PO Box 1487, Fyshwick, ACT, 2609

Sample Details

Your Reference	**103028.01, Jerrabomberra**
Number of Samples	110 soil, 3 water
Date samples received	14/08/2020
Date completed instructions received	19/08/2020

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.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	25/08/2020
Date of Issue	25/08/2020
Reissue Details	This report replaces R00 created on 25/08/2020 due to: matrix type error

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Results Approved By
, Team Leader, Inorganics
, Senior Chemist
, Senior Chemist
, Asbestos Supervisor
, Organics Development Manager, Sydney
, Organics Supervisor

Authorised By

, Laboratory Manager

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	98	99	103	113	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	128	97	114	103	106

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	110	112	110	112	111

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	115	109	117	124	100

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	98	109	110	103	110

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-86	249251-89	249251-90	249251-91	249251-92
Your Reference	UNITS	Bore 18	TB1	TS2	TB2	TS3
Depth		0.1	-	-	-	-
Date Sampled		10/08/2020	4/08/2020	5/08/2020	5/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	[NA]	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	[NA]	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	[NA]	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	110%	<0.2	103%
Toluene	mg/kg	<0.5	<0.5	115%	<0.5	105%
Ethylbenzene	mg/kg	<1	<1	112%	<1	106%
m+p-xylene	mg/kg	<2	<2	113%	<2	107%
o-Xylene	mg/kg	<1	<1	114%	<1	108%
naphthalene	mg/kg	<1	<1	[NA]	<1	[NA]
Total +ve Xylenes	mg/kg	<3	<3	[NA]	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	105	106	103	104	100

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-93	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	TB3	R5	R6	Bore 19	Bore 19
Depth		-	-	-	0.1	2.0
Date Sampled		6/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	20/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	20/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	114	101	101	104	111

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		249251-111	249251-112	249251-113
Your Reference	UNITS	TS1	TS4	TB4
Depth		-	-	-
Date Sampled		11/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	[NA]	[NA]	<25
TRH C_6 - C_{10}	mg/kg	[NA]	[NA]	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	[NA]	[NA]	<25
Benzene	mg/kg	97%	109%	<0.2
Toluene	mg/kg	94%	112%	<0.5
Ethylbenzene	mg/kg	97%	112%	<1
m+p-xylene	mg/kg	96%	111%	<2
o-Xylene	mg/kg	97%	112%	<1
naphthalene	mg/kg	[NA]	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	[NA]	<3
Surrogate aaa-Trifluorotoluene	%	95	96	108

Client Reference: 103028.01, Jerrabomberra

svTRH (C10-C40) in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	110	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	130	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	52	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	52	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	190	100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	240	100	<50	<50	<50
Surrogate o-Terphenyl	%	87	89	86	98	84

svTRH (C10-C40) in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	96	86	87	102	87

Client Reference: 103028.01, Jerrabomberra

svTRH (C10-C40) in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	85	85	87	87	88

svTRH (C10-C40) in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	110
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	180
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	240
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	150
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	390
Surrogate o-Terphenyl	%	86	87	97	87	97

Client Reference: 103028.01, Jerrabomberra

svTRH (C10-C40) in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	88	88	87	87

svTRH (C10-C40) in Soil						
Our Reference		249251-86	249251-89	249251-91	249251-93	249251-97
Your Reference	UNITS	Bore 18	TB1	TB2	TB3	R5
Depth		0.1	-	-	-	-
Date Sampled		10/08/2020	4/08/2020	5/08/2020	6/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	120	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	120	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	89	85	86	85

Client Reference: 103028.01, Jerrabomberra

svTRH (C10-C40) in Soil					
Our Reference		249251-98	249251-100	249251-103	249251-113
Your Reference	UNITS	R6	Bore 19	Bore 19	TB4
Depth		-	0.1	2.0	-
Date Sampled		11/08/2020	5/08/2020	5/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	87	87	87	91

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	115	115	120	119	120

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	130	119	118	123	121

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	119	120	120	120	125

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.3
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	<0.1	<0.1	0.3
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.3
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.7
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	10
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	3.9
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	3.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	5.8
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	4.6
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	34
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Surrogate p-Terphenyl-d14	%	121	120	119	123	121

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	121	123	122	123	124

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	122	119	127	121	121

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Surrogate TCMX	%	93	94	113	112	114

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	117	116	115	115

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	113	112	114

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	113	117	115	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

Client Reference: 103028.01, Jerrabomberra

PCBs in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	113	112	114

PCBs in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

PCBs in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	113	117	115	115

PCBs in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

Client Reference: 103028.01, Jerrabomberra

PCBs in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

PCBs in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

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Acid Extractable metals in soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	5	4	<4	4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	78	42	48	28	45
Copper	mg/kg	10	23	14	12	14
Lead	mg/kg	14	60	20	72	36
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	10	10	7	8
Zinc	mg/kg	14	120	42	57	27

Acid Extractable metals in soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	49	56	31	46	34
Copper	mg/kg	8	9	11	17	10
Lead	mg/kg	6	12	26	9	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	14	6	6	16	7
Zinc	mg/kg	52	12	28	31	37

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Acid Extractable metals in soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	7	7	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	40	38	32	35	51
Copper	mg/kg	7	10	12	16	20
Lead	mg/kg	15	23	13	37	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	5	6	10	17
Zinc	mg/kg	13	33	16	120	40

Acid Extractable metals in soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	29	52	39	45	17
Copper	mg/kg	10	10	8	14	7
Lead	mg/kg	14	15	9	7	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	6	16	13	23
Zinc	mg/kg	16	14	16	46	11

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Acid Extractable metals in soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	36	59	36	24	35
Copper	mg/kg	12	21	14	13	14
Lead	mg/kg	12	12	21	28	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	15	10	10	13
Zinc	mg/kg	31	19	56	55	18

Acid Extractable metals in soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	41	50	52	52	43
Copper	mg/kg	17	8	20	19	14
Lead	mg/kg	35	30	10	23	34
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	5	14	12	10
Zinc	mg/kg	52	20	19	42	58

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Acid Extractable metals in soil			
Our Reference		249251-114	249251-115
Your Reference	UNITS	Bore 1 - [TRIPLICATE]	Bore 15 - [TRIPLICATE]
Depth		0.1	0.1
Date Sampled		11/08/2020	5/08/2020
Type of sample		soil	soil
Date prepared	-	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	49	44
Copper	mg/kg	12	14
Lead	mg/kg	12	11
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	7	9
Zinc	mg/kg	17	22

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Misc Soil - Inorg						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

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Misc Soil - Inorg						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

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Moisture						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-13
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 3
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	7.9	18	15	13	11

Moisture						
Our Reference		249251-14	249251-18	249251-19	249251-22	249251-24
Your Reference	UNITS	Bore 4	Bore 4	Bore 5	Bore 6	Bore 6
Depth		0.1	3.0	0.1	0.1	1.0
Date Sampled		6/08/2020	4/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	8.3	6.1	14	15	15

Moisture						
Our Reference		249251-25	249251-30	249251-31	249251-33	249251-39
Your Reference	UNITS	Bore 6	Bore 7	Bore 7	Bore 8	Bore 8
Depth		2.0	0.1	0.5	0.1	5.0
Date Sampled		4/08/2020	11/08/2020	11/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	25	16	32	9.3	6.3

Moisture						
Our Reference		249251-40	249251-41	249251-43	249251-45	249251-46
Your Reference	UNITS	Bore 9	Bore 9	Bore 10	Bore 10	Bore 10
Depth		0.1	0.5	0.1	1.0	2.0
Date Sampled		6/08/2020	6/08/2020	4/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	7.9	14	16	20	8.0

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Moisture						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	9.5	13	13	8.4	3.2

Moisture						
Our Reference		249251-68	249251-70	249251-71	249251-76	249251-83
Your Reference	UNITS	Bore 14	Bore 15	Bore 15	Bore 16	Bore 17
Depth		5.0	0.1	0.5	0.1	0.1
Date Sampled		5/08/2020	5/08/2020	5/08/2020	5/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	10	16	23	16	20

Moisture						
Our Reference		249251-85	249251-86	249251-97	249251-98	249251-100
Your Reference	UNITS	Bore 17	Bore 18	R5	R6	Bore 19
Depth		1.0	0.1	-	-	0.1
Date Sampled		10/08/2020	10/08/2020	11/08/2020	11/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	20	13	13	25	19

Moisture		
Our Reference		249251-103
Your Reference	UNITS	Bore 19
Depth		2.0
Date Sampled		5/08/2020
Type of sample		soil
Date prepared	-	18/08/2020
Date analysed	-	19/08/2020
Moisture	%	19

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Asbestos ID - soils						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	31.93g	Approx. 30g	Approx. 30g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	YES	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

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Asbestos ID - soils						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 45g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	Approx. 45g	Approx. 30g	Approx. 25g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - soils						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - soils						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	25.44g	Approx. 25g	Approx. 25g	Approx. 25g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	YES	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 30g	Approx. 25g	Approx. 25g	Approx. 30g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

PFAS in Soils Short						
Our Reference		249251-1	249251-13	249251-25	249251-31	249251-39
Your Reference	UNITS	Bore 1	Bore 3	Bore 6	Bore 7	Bore 8
Depth		0.1	1.0	2.0	0.5	5.0
Date Sampled		11/08/2020	6/08/2020	4/08/2020	11/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	1.8	0.6	<0.1	0.2	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.7	0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	108	109	98	112	101
Surrogate $^{13}C_2$ *PFOA*	%	95	108	98	101	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	79	93	94	92	99
Extracted ISTD $^{13}C_4$ *PFOS*	%	64	69	79	76	85
Extracted ISTD $^{13}C_4$ *PFOA*	%	66	84	91	88	92
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	73	88	88	85	95
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	75	108	100	108	113
Total Positive PFHxS & PFOS	µg/kg	2.2	0.6	<0.1	0.2	<0.1
Total Positive PFOS & PFOA	µg/kg	2.5	0.7	<0.1	0.2	<0.1
Total Positive PFAS	µg/kg	2.9	0.7	<0.1	0.2	<0.1

Client Reference: 103028.01, Jerrabomberra

PFAS in Soils Short						
Our Reference		249251-46	249251-52	249251-68	249251-85	249251-100
Your Reference	UNITS	Bore 10	Bore 12	Bore 14	Bore 17	Bore 19
Depth		2.0	0.1	5.0	1.0	0.1
Date Sampled		4/08/2020	11/08/2020	5/08/2020	10/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	0.4	<0.1	<0.1	0.9
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	101	108	102	105	112
Surrogate $^{13}C_2$ *PFOA*	%	96	95	92	95	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%	103	93	99	104	92
Extracted ISTD $^{13}C_4$ *PFOS*	%	110	106	113	110	106
Extracted ISTD $^{13}C_4$ *PFOA*	%	110	108	105	103	99
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95	113	98	97	180
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	102	106	107	97	#
Total Positive PFHxS & PFOS	µg/kg	<0.1	0.6	<0.1	<0.1	0.9
Total Positive PFOS & PFOA	µg/kg	<0.1	0.6	<0.1	<0.1	0.9
Total Positive PFAS	µg/kg	<0.1	0.8	<0.1	<0.1	0.9

Client Reference: 103028.01, Jerrabomberra

Misc Inorg - Soil				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020
pH 1:5 soil:water	pH Units	6.3	7.1	6.3

Client Reference: 103028.01, Jerrabomberra

CEC				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	21/08/2020	21/08/2020	21/08/2020
Exchangeable Ca	meq/100g	10	14	6.2
Exchangeable K	meq/100g	0.2	0.4	0.4
Exchangeable Mg	meq/100g	10	9.8	6.4
Exchangeable Na	meq/100g	0.50	0.94	0.67
Cation Exchange Capacity	meq/100g	21	25	14

Client Reference: 103028.01, Jerrabomberra

Clay 50-120g				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	24/08/2020	24/08/2020	24/08/2020
Clay in soils <2µm	% (w/w)	42	68	76

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Water				
Our Reference		249251-94	249251-95	249251-96
Your Reference	UNITS	RIN1	RIN2	RIN3
Depth		-	-	-
Date Sampled		5/08/2020	6/08/2020	10/08/2020
Type of sample		water	water	water
Date extracted	-	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020
TRH C_6 - C_9	µg/L	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10
Benzene	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
o-xylene	µg/L	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	105	122	122
Surrogate toluene-d8	%	93	96	92
Surrogate 4-BFB	%	88	86	87

Client Reference: 103028.01, Jerrabomberra

svTRH (C10-C40) in Water				
Our Reference		249251-94	249251-95	249251-96
Your Reference	UNITS	RIN1	RIN2	RIN3
Depth		-	-	-
Date Sampled		5/08/2020	6/08/2020	10/08/2020
Type of sample		water	water	water
Date extracted	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	22/08/2020	22/08/2020	22/08/2020
TRH C_{10} - C_{14}	µg/L	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100
Surrogate o-Terphenyl	%	105	107	99

Client Reference: 103028.01, Jerrabomberra

Method ID	Methodology Summary
AS1289.3.6.3	Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
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-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

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Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
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 are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
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.
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.
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.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

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QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			20/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	89	81
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	89	81
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	75	69
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	94	86
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	94	87
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	90	81
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	89	81
naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	113	1	98	110	12	112	103

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	33	<25	<25	0	80	82
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	33	<25	<25	0	80	82
Benzene	mg/kg	0.2	Org-023	[NT]	33	<0.2	<0.2	0	77	70
Toluene	mg/kg	0.5	Org-023	[NT]	33	<0.5	<0.5	0	82	87
Ethylbenzene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	81	87
m+p-xylene	mg/kg	2	Org-023	[NT]	33	<2	<2	0	77	82
o-Xylene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	76	81
naphthalene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	33	110	106	4	99	104

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	70	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	70	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	70	98	102	4	[NT]	[NT]

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QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	103	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	103	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	103	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	103	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	103	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	103	111	101	9	[NT]	[NT]

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QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	88	103
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	110	110	0	72	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	130	160	21	123	120
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	52	<50	4	88	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	190	220	15	72	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	110	10	123	120
Surrogate o-Terphenyl	%		Org-020	90	1	87	103	17	112	89

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	107	100
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	97	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	108	118
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	107	100
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	97	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	108	118
Surrogate o-Terphenyl	%		Org-020	[NT]	33	85	86	1	106	87

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	70	88	89	1	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	103	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	103	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	103	87	87	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	99
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	103
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	104
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	111	109
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	107
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	112
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	108	107
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	123	1	115	115	0	113	112

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	101
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	106
Fluorene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	105
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	113	109
Anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	107
Pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	118	114
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	33	<0.05	<0.05	0	107	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	33	119	118	1	121	117

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QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	70	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	70	121	122	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	103	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	103	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	103	121	121	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	101
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	98
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	99
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	105	103
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	104
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	127
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	86
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	110
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	105
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	118	1	93	93	0	92	91

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	96	97
HCB	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	111	108
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	103	97
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	108	105
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	106	104
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	101	95
Endrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	70	82
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	74	74
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	82	78
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	33	114	113	1	115	113

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	114	116	2	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	94
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	105
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	83
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	124
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	107
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	84
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	91
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	118	1	93	93	0	92	91

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	78	71
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	96	96
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	83	71
Malathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	80	92
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	97	97
Parathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	76	73
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	70	113
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	33	114	113	1	115	113

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	114	116	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	118	116
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	118	1	93	93	0	92	91

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	120	118
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	33	114	113	1	115	113

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	70	114	116	2	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date prepared	-			19/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Date analysed	-			19/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Arsenic	mg/kg	4	Metals-020	<4	1	5	<4	22	103	86
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	104	85
Chromium	mg/kg	1	Metals-020	<1	1	78	43	58	102	87
Copper	mg/kg	1	Metals-020	<1	1	10	9	11	99	94
Lead	mg/kg	1	Metals-020	<1	1	14	11	24	101	108
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	88	97
Nickel	mg/kg	1	Metals-020	<1	1	8	6	29	103	86
Zinc	mg/kg	1	Metals-020	<1	1	14	12	15	103	102

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date prepared	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Date analysed	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Arsenic	mg/kg	4	Metals-020	[NT]	33	<4	<4	0	96	69
Cadmium	mg/kg	0.4	Metals-020	[NT]	33	<0.4	<0.4	0	98	71
Chromium	mg/kg	1	Metals-020	[NT]	33	40	34	16	98	85
Copper	mg/kg	1	Metals-020	[NT]	33	7	7	0	96	87
Lead	mg/kg	1	Metals-020	[NT]	33	15	14	7	98	71
Mercury	mg/kg	0.1	Metals-021	[NT]	33	<0.1	<0.1	0	95	77
Nickel	mg/kg	1	Metals-020	[NT]	33	6	5	18	99	77
Zinc	mg/kg	1	Metals-020	[NT]	33	13	10	26	98	88

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	70	<4	5	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	70	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	70	36	78	74	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	70	12	13	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	70	12	11	9	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	70	8	15	61	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	70	31	32	3	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	103	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	103	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	103	43	42	2	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	103	14	15	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	103	34	30	12	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	103	10	11	10	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	103	58	49	17	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date prepared	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	102	101

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date prepared	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	33	<5	<5	0	103	103

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	70	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	103	<5	<5	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-85
Date prepared	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	0.4	0.3	29	109	99
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	1.8	1.8	0	98	91
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	0.7	0.8	13	100	98
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	102	87
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	102	134
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	95	1	108	104	4	106	100
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	106	1	95	106	11	100	96
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	97	1	79	78	1	98	103
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	90	1	64	63	2	107	108
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	94	1	66	66	0	105	103
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	100	1	73	73	0	98	107
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	107	1	75	71	5	108	85

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
Date analysed	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Date analysed	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
Date analysed	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	111	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	117	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	117	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	107	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate toluene-d8	%		Org-023	92	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate 4-BFB	%		Org-023	88	[NT]	[NT]	[NT]	[NT]	115	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Date analysed	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
Surrogate o-Terphenyl	%		Org-020	116	[NT]	[NT]	[NT]	[NT]	72	[NT]

Client Reference: 103028.01, Jerrabomberra

Result Definitions	
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

Client Reference: 103028.01, Jerrabomberra

Quality Control 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.

Client Reference: 103028.01, Jerrabomberra

Report Comments

BTEX/TRH/PAH/OCP/OPP/PCB/Phenols of Bore 4/3.0 - out of recommended holding time

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 249251-1 for Cr. Therefore a triplicate result has been issued as laboratory sample number 249251-114.
- The laboratory RPD acceptance criteria has been exceeded for 249251-70 for Cr and Ni. Therefore a triplicate result has been issued as laboratory sample number 249251-115.
- Spike recovery for As in sample #85 at 69% which is outside lab acceptance criteria (70-130%), however, the LCS recovery is acceptable at 96%. Sample heterogeneity suspected.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

pH / EC
Samples were out of the recommended holding time for this analysis.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples were sub-sampled from jars provided by the client.

Sample 249251-4; Chrysotile asbestos identified in matted material, it is estimated to be 0.34g/kg in 31.93g of soil (i.e. > reporting limit for the method of 0.1g/kg).

Sample 249251-70; Loose fibre bundles of Chrysotile asbestos identified within the sample, however it is estimated less than the reporting limit for the method (i.e. < 0.1g/kg).

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
116 M1	—	05/08/20	M	P				x						To be sent on Monday
117 M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
RR5	—	11/08/20	S	G	x									Please send to third party lab
RR6	—	11/08/20	S	G	x									Please send to third party lab
RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

rec'd on 21/8/2020 10:30 RL

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Lab Report/Reference No:

Metals to Analyse: 8HM unless specified here:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

249251 - A

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customerservice@envirolab.com.au
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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Canberra
Attention	

Sample Login Details

Your reference	103028.01, Jerrabomberra
Envirolab Reference	249251-A
Date Sample Received	14/08/2020
Date Instructions Received	21/08/2020
Date Results Expected to be Reported	28/08/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	109 soil, 1 18, 3 water, 2 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: @envirolab.com.au	**Email: @envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	Asbestos ID - materials	On Hold
Bore 1-0.1		✓
Bore 1-0.5		✓
Bore 1-1.0		✓
Bore 2-0.1		✓
Bore 2-0.5		✓
Bore 2-1.0		✓
Bore 2-2.0		✓
Bore 2-3.0		✓
Bore 2-4.0		✓
Bore 2-5.0		✓
Bore 3-0.1		✓
Bore 3-0.5		✓
Bore 3-1.0		✓
Bore 4-0.1		✓
Bore 4-0.5		✓
Bore 4-1.0		✓
Bore 4-2.0		✓
Bore 4-3.0		✓
Bore 5-0.1		✓
Bore 5-0.5		✓
Bore 5-1.0		✓
Bore 6-0.1		✓
Bore 6-0.5		✓
Bore 6-1.0		✓
Bore 6-2.0		✓
Bore 6-3.0		✓
Bore 6-4.0		✓
Bore 6-5.0		✓
Bore 6-6.0		✓
Bore 7-0.1		✓
Bore 7-0.5		✓
Bore 7-1.0		✓

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Sample ID	Asbestos ID - materials	On Hold
Bore 8-0.1		✓
Bore 8-0.5		✓
Bore 8-1.0		✓
Bore 8-2.0		✓
Bore 8-3.0		✓
Bore 8-4.0		✓
Bore 8-5.0		✓
Bore 9-0.1		✓
Bore 9-0.5		✓
Bore 9-1.0		✓
Bore 10-0.1		✓
Bore 10-0.5		✓
Bore 10-1.0		✓
Bore 10-2.0		✓
Bore 10-3.0		✓
Bore 10-4.0		✓
Bore 11-0.1		✓
Bore 11-0.5		✓
Bore 11-1.0		✓
Bore 12-0.1		✓
Bore 12-0.5		✓
Bore 12-1.0		✓
Bore 13-0.1		✓
Bore 13-0.5		✓
Bore 13-1.0		✓
Bore 13-2.0		✓
Bore 13-3.0		✓
Bore 13-4.0		✓
Bore 13-5.0		✓
Bore 14-0.1		✓
Bore 14-0.5		✓
Bore 14-1.0		✓

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Sample ID	Asbestos ID - materials	On Hold
Bore 14-2.0		✓
Bore 14-3.0		✓
Bore 14-4.0		✓
Bore 14-5.0		✓
Bore 14-6.0		✓
Bore 15-0.1		✓
Bore 15-0.5		✓
Bore 15-1.0		✓
Bore 15-2.0		✓
Bore 15-3.0		✓
Bore 15-4.0		✓
Bore 16-0.1		✓
Bore 16-0.5		✓
Bore 16-1.0		✓
Bore 16-2.0		✓
Bore 16-3.0		✓
Bore 16-4.0		✓
Bore 16-5.0		✓
Bore 17-0.1		✓
Bore 17-0.5		✓
Bore 17-1.0		✓
Bore 18-0.1		✓
Bore 18-0.5		✓
Bore 18-1.0		✓
TB1		✓
TS2		✓
TB2		✓
TS3		✓
TB3		✓
RIN1		✓
RIN2		✓
RIN3		✓

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Sample ID	Asbestos ID - materials	On Hold
R5		✓
R6		✓
R7		✓
Bore 19-0.1		✓
Bore 19-0.5		✓
Bore 19-1.0		✓
Bore 19-2.0		✓
Bore 19-3.0		✓
Bore 19-4.0		✓
Bore 19-5.0		✓
R1		✓
R2		✓
R3		✓
R4		✓
TS1		✓
TS4		✓
TB4		✓
Bore 1 - [TRIPLICATE]-0.1		✓
Bore 15 - [TRIPLICATE]-0.1		✓
M1	✓	
M2	✓	

The '✓' 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.

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CERTIFICATE OF ANALYSIS 249251-A

Client Details

Client	Douglas Partners Canberra
Attention	Peter Storey
Address	PO Box 1487, Fyshwick, ACT, 2609

Sample Details

Your Reference	**103028.01, Jerrabomberra**
Number of Samples	109 soil, 1 18, 3 water, 2 material
Date samples received	14/08/2020
Date completed instructions received	21/08/2020

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	28/08/2020
Date of Issue	25/08/2020

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Asbestos Approved By
Analysed by Asbestos Approved Identifier:
Authorised by Asbestos Approved Signatory:
Results Approved By
, Asbestos Supervisor

Authorised By
, Laboratory Manager

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - materials			
Our Reference		249251-A-116	249251-A-117
Your Reference	UNITS	M1	M2
Depth		-	-
Date Sampled		05/08/2020	10/08/2020
Type of sample		material	material
Date analysed	-	25/08/2020	25/08/2020
Mass / Dimension of Sample	-	45x40x4mm	80x40x5mm
Sample Description	-	Beige fibre cement material	Beige fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected
Trace Analysis	-	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

Client Reference: 103028.01, Jerrabomberra

Result Definitions	
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

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2029214**		
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: [redacted]	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: [redacted]@douglaspartners.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 103028.01 Jerrabomberra	Page	: 1 of 3
Order number	: ----	Quote number	: EM2017DOUPAR0002 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Jerrabomberra		
Sampler	:		

Dates

Date Samples Received	: 19-Aug-2020 18:15	Issue Date	: 20-Aug-2020
Client Requested Due Date	: 27-Aug-2020	Scheduled Reporting Date	: **27-Aug-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 12.6 - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 6 / 6

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- **EA200: As only one sample container was submitted for multiple tests, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Issue Date	:	20-Aug-2020
Page	:	2 of 3
Work Order	:	ES2029214 Amendment 0
Client	:	DOUGLAS PARTNERS PTY LTD

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA055-103 Moisture Content	SOIL - EA200G Asbestos Identification in Soils -	SOIL - EP035SF (solids) Total Phenol by Segmented Flow Analyser	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals
ES2029214-001	11-Aug-2020 00:00	RR5	✓	✓	✓	✓
ES2029214-002	11-Aug-2020 00:00	RR6	✓	✓	✓	✓
ES2029214-003	11-Aug-2020 00:00	RR7	✓	✓	✓	✓
ES2029214-004	11-Aug-2020 00:00	RR5		✓		
ES2029214-005	11-Aug-2020 00:00	RR6		✓		
ES2029214-006	11-Aug-2020 00:00	RR7		✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Issue Date	:	20-Aug-2020
Page	:	3 of 3
Work Order	:	ES2029214 Amendment 0
Client	:	DOUGLAS PARTNERS PTY LTD

Requested Deliverables

ACCOUNTS BRISBANE

- A4 - AU Tax Invoice (INV)	Email	brisbane@douglaspartners.com.au

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)	Email	accounts@douglaspartners.com.au
- *AU Certificate of Analysis - NATA (COA)	Email	@douglaspartners.com.
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	@douglaspartners.com.
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	@douglaspartners.com.
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	@douglaspartners.com.
- Chain of Custody (CoC) (COC)	Email	@douglaspartners.com.
- EDI Format - ENMRG (ENMRG)	Email	@douglaspartners.com.
- EDI Format - ESDAT (ESDAT)	Email	@douglaspartners.com.
- EDI Format - XTab (XTAB)	Email	@douglaspartners.com.
- *AU Certificate of Analysis - NATA (COA)	Email	@douglaspartner
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	@douglaspartner
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	@douglaspartner
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	@douglaspartner
- Chain of Custody (CoC) (COC)	Email	@douglaspartner
- EDI Format - ENMRG (ENMRG)	Email	@douglaspartner
- EDI Format - ESDAT (ESDAT)	Email	@douglaspartner
- EDI Format - XTab (XTAB)	Email	@douglaspartner

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
M1	—	05/08/20	M	P				x						To be sent on Monday
M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
1 RR5	—	11/08/20	S	G	x									Please send to third party lab
2 RR6	—	11/08/20	S	G	x									Please send to third party lab
3 RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes**

Environmental Division
Sydney
Work Order Reference
ES2029214

Telephone : + 61-2-8784 8555

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

Relinquished by EDS SYD [redacted]
19/8/20 1030 am

249251

Rec- Soffian [redacted]
21/8/20 1815 12 C

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au	[redacted]		**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Analytes: Hold	Analytes	Analytes	Analytes	Analytes	Analytes	Analytes	Analytes	Notes/preservation
R6	98	11/08/20		P		x								
R7	99	11/08/20		P		x								
4 RR5	—	11/08/20		P		x								Please send to third party lab
5 RR6	—	11/08/20		P		x								Please send to third party lab
6 RR7	—	11/08/20		P		x								Please send to third party lab
R1	107			P		x								
R2	108			P		x								
R3	109			P		x								
R4	110			P		x								
Bore 19/0.1	100	05/08/20	S	P	x									
Bore 19/0.5	101	05/08/20	S	P		x								
Bore 19/1.0	102	05/08/20	S	P		x								
Bore 19/2.0	103	05/08/20	S	P		x								
Bore 19/3.0	104	05/08/20	S	P		x								
Bore 19/4.0	105	05/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes**	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

Relinquished by EDS Syd
[redacted]
19/8/20 1000
CM

249251

Rec - 60 for 5 days
19/8/20 1815
12°C

[redacted]

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2029214**	Page	: 1 of 8
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: [redacted]	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020 18:15
Order number	: ----	Date Analysis Commenced	: 21-Aug-2020
C-O-C number	: ----	Issue Date	: 27-Aug-2020 16:52
Sampler	: ----		
Site	: Jerrabomberra		
Quote number	: EN/222		
No. of samples received	: 6		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Coordinator	Sydney Organics, Smithfield, NSW
	Analyst	Sydney Inorganics, Smithfield, NSW

Page	:	2 of 8
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

General Comments

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

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- **EA200: As only one sample container was submitted for multiple tests, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		18.8	25.4	10.8	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	----	----
Asbestos (Trace)	1332-21-4	5	Fibres		No	No	No	----	----
Asbestos Type	1332-21-4	-	--		-	-	-	----	----
Sample weight (dry)	----	0.01	g		12.6	9.31	21.0	----	----
APPROVED IDENTIFIER:	----	-	--		A. SMYLIE	A. SMYLIE	A. SMYLIE	----	----
Synthetic Mineral Fibre	----	0.1	g/kg		No	No	No	----	----
Organic Fibre	----	0.1	g/kg		No	No	No	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		15	21	19	----	----
Copper	7440-50-8	5	mg/kg		<5	10	5	----	----
Lead	7439-92-1	5	mg/kg		12	<5	8	----	----
Nickel	7440-02-0	2	mg/kg		<2	7	3	----	----
Zinc	7440-66-6	5	mg/kg		10	7	6	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	1	mg/kg		<1	<1	<1	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----

Page	:	4 of 8
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued									
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		101	102	107	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		112	106	116	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		103	88.0	107	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		88.4	82.8	86.9	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		90.6	83.9	88.0	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		75.1	64.2	77.1	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		102	94.8	96.3	----	----
Anthracene-d10	1719-06-8	0.5	%		99.7	94.8	94.7	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		97.3	89.8	91.2	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		83.3	87.0	97.8	----	----
Toluene-D8	2037-26-5	0.2	%		91.8	96.6	103	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		96.6	97.1	100	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	RR5 - 11-Aug-2020 00:00	Mid brown soil.
EA200: Description	RR6 - 11-Aug-2020 00:00	Mid brown soil.
EA200: Description	RR7 - 11-Aug-2020 00:00	Mid brown soil.

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2029214**	Page	: 1 of 11
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	:	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020
Order number	: ----	Date Analysis Commenced	: 21-Aug-2020
C-O-C number	: ----	Issue Date	: 27-Aug-2020
Sampler	: ----		
Site	: Jerrabomberra		
Quote number	: EN/222		
No. of samples received	: 6		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Coordinator	Sydney Organics, Smithfield, NSW
	Analyst	Sydney Inorganics, Smithfield, NSW

Page	:	2 of 11
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3213117)									
ES2029214-001	RR5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	10	43.7	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	9	27.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	10	8	21.7	No Limit
EP035SF: Total Phenol by Segmented Flow Analyser (QC Lot: 3214015)									
EP2008781-001	Anonymous	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.00	No Limit
ES2029214-003	RR7	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3213120)									
ES2029124-003	Anonymous	EA055: Moisture Content	----	0.1	%	63.6	69.2	8.35	0% - 20%
ES2029215-001	Anonymous	EA055: Moisture Content	----	0.1	%	14.0	14.0	0.00	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3213116)									
ES2029124-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2029214-001	RR5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3210880)									
ES2028391-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2029214-002	RR6	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3210879)									
ES2028391-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3210879) - continued									
ES2028391-001	Anonymous	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES2029214-002	RR6	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3210879)									
ES2028391-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3210879) - continued									
ES2028391-001	Anonymous	EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES2029214-002	RR6	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3210878)									
ES2028391-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3210878) - continued									
ES2028391-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2029214-002	RR6	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3210877)									
ES2028391-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3210877) - continued									
ES2028391-001	Anonymous	EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2029214-002	RR6	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2029215-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3210877)									
ES2028391-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2029214-002	RR6	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2029215-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES2029215-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3213117)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	98 mg/kg	116	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	84.2	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15.4 mg/kg	123	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	48 mg/kg	113	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	50 mg/kg	113	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	12.4 mg/kg	107	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	115 mg/kg	109	70.0	130
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 3214015)								
EP035SF: Phenols (Total)	----	1	mg/kg	<1	20 mg/kg	101	60.0	102
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3213116)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	97.4	70.0	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3210880)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	110	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	99.3	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	101	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.0	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	79.7	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	64.0	122

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879) - continued								
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	87.8	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3210879)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.2	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	90.5	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.7	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	85.9	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	75.1	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	86.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	76.0	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.1	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	62.6	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3210878)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	97.1	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	98.9	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	106	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	109	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	105	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	106	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	95.0	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	102	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	99.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	98.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	93.9	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3210877)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	97.9	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	106	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	102	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3212269)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	78.5	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3210877)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	102	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	103	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	92.5	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3212269)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	83.4	68.4	128
EP080: BTEXN (QCLot: 3212269)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	89.2	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	103	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	98.6	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	100	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.0	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3213117)							
ES2029124-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.3	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	94.1	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	96.3	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	94.1	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	98.0	70.0	130
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 3214015)							
EP2008781-001	Anonymous	EP035SF: Phenols (Total)	----	20 mg/kg	102	70.0	130

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Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3213116)							
ES2029124-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	78.6	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3210880)							
ES2028391-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	116	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879)							
ES2028391-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	117	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	118	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	87.8	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	90.3	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	105	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3210879)							
ES2028391-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	82.7	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	84.3	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	77.4	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	75.9	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	79.5	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3210878)							
ES2028391-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	102	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	101	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3210877)							
ES2028391-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	104	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	112	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	127	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	118	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3210877)							
ES2028391-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	115	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	116	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	123	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	106	70.0	130
EP080: BTEXN (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	104	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	82.9	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	84.5	70.0	130

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Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 3212269) - continued							
ES2029196-002	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	83.9	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.0	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	82.5	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2029214**	Page	: 1 of 6
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact		Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020
Site	: Jerrabomberra	Issue Date	: 27-Aug-2020
Sampler	: ----	No. of samples received	: 6
Order number	: ----	No. of samples analysed	: 3

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

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

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Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Total Metals by ICP-AES	1	20	5.00	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / *Container / Client Sample ID(s)*	*Sample Date*	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	*Date analysed*	*Due for analysis*	*Evaluation*
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) RR5, RR6, RR7	**11-Aug-2020**	**----**	----	----	**21-Aug-2020**	25-Aug-2020	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) RR5, RR6, RR7	**11-Aug-2020**	**----**	----	----	**24-Aug-2020**	07-Feb-2021	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	07-Feb-2021	✓	**25-Aug-2020**	07-Feb-2021	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	08-Sep-2020	✓	**25-Aug-2020**	08-Sep-2020	✓
EP035SF: Total Phenol by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EP035SF) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**24-Aug-2020**	25-Aug-2020	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓

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Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	30-Sep-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓

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Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

Evaluation: ✘ = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	13	15.38	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	10.00	✘	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Total Phenol By Discrete Analyser	EP035SF	SOIL	In house: Referenced to ISO 14402. Phenols are extracted in 1M NaOH. The extract is diluted by 10 and then in-line-distilled at pH 1- 4. The distillate, containing steam-volatile phenolic compounds is then oxidised by hexacyanoferrate(III). The resulting quinones react with 4-aminoantipyrine forming red condensation products, which are measured spectrometrically in a flow spectrometer at 505 nm. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Extraction for Total Phenols in soil	EP035-PR	SOIL	In house: Soil sub-sample is extracted in 1M NaOH by tumbling for between 6 and 16 hours. The resulting extract is diluted 10 times with reagent grade water prior to analysis.
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

Attachment 4 Unexpected Finds Protocol

In general, environmental assessments are based on results from a desktop review of land use history and a statistically designed investigation program; actual conditions may vary from those expected during intrusive excavation works, and evidence of contamination may be encountered where it was not previously reported.

These unexpected finds may include soils that are observed to have a visual impact (staining, discoloration), olfactory impact (odour) and/or may be impacted with anthropogenic inclusions (demolition waste, asbestos, putrescible or other wastes, etc.).

Unexpected finds (typical to Canberra, in general) may include (but are not limited to) the following:

- **Fill incorporating demolition wastes**: Historically, poor demolition and waste disposal practices has led to the unsystematic occurrence of fill incorporating demolition wastes (also known as "builders waste") being present throughout Canberra. This may be indicated by the presence of anthropogenic material, such as concrete rubble, bricks, plastic, metal, sheeting, and other materials associated with demolished built structures.

  Of concern was the prevalence of asbestos in domestic building materials until their use was banned in the 1980s (and later complete ban in 2003 of asbestos in all products). Bonded asbestos (i.e. cement sheeting, eaves, cladding, roof tiles/shingles) and to a lesser extent fibrous asbestos (i.e. pipe lagging, boiler insulation, sprayed insulation) can be co-located with demolition wastes, particularly those from buildings pre-dating the 1980s.
- **Visual or olfactory signs of soil contamination**: This may include a hydrocarbon odour, ash, cinders or slag, or soil staining. These signs of contamination may be associated with disposal of industrial/ commercial wastes (i.e. incinerator wastes) or spills or leaks (e.g. from storage of hydrocarbon fuels or lubricants).

It is the responsibility of the Project Manager (Lendlease or their delegate) to ensure that all personnel involved with intrusive works are inducted to the UFP. Where applicable, additional training to deal with unexpected finds may be required, for example the Asbestos Awareness Course which is mandatory for the construction industry in the ACT.

In the event that unexpected finds of potential contamination are identified during works, the procedures outlined below.

Action	Responsibility
AWARENESS All site workers involved with intrusive works are to be inducted into the UFP.	Project Manager Contractors SQEC
UNEXPECTED FIND ENCOUNTERED 1. **STOP WORK –** All excavation in the immediate area to cease to minimise further disturbance of any contaminated soil which may increase an exposure risk to nearby workers. 2. **MAKE SAFE –** Following cessation of nearby works, the area should be made safe by the implementation of an '**EXCLUSION AREA**'. This must include physical demarcation using safety cones, hazard tape (or similar) at a minimum. If a larger area of contamination is identified, where works will occur over longer timeframes, the area should be protected by fencing. Site workers to be notified and advised not to disturb the find. If safe to do so, the unexpected finds may be covered with clean soil to limit the risk of exposure. This may be discussed with the SQEC on a case by case basis. 3. **NOTIFY** – Notify the Site Supervisor, Foreman or similarly responsible persons who will contact the SQEC to inspect the find.	PC Contractors

ASSESSMENT OF THE FIND SQEC to undertake an assessment to determine the nature and extent of the find including any interim management measures.	SQEC
NOTIFICATION Notify the relevant regulatory authorities of the find. **Note**: If asbestos containing materials are encountered, the DM (or delegate) to notify Worksafe ACT and submit a Dangerous Occurrence Report (DS-238) within 48 hours. The SQEC to assist with describing the occurrence and any implemented management measures.	PM SQEC
REMEDIATION Manage, remove, or treat the contamination in accordance with the applicable EPA regulations, laws, guidelines, and industry practice in accordance with advice from the SQEC. Depending on the nature and extent of the find, a Remediation Action Plan (RAP) may need to be prepared and submitted to the Auditor (if still under Audit) or the EPA for review and approval. If the management approach includes off-site disposal of contaminated soil, EPA approval will be required and will be managed by the SQEC.	PC Contractors SQEC
VALIDATION Validation demonstrating the successful removal or management of the find may be required. The SQEC to advise what may be appropriate depending on the nature of the find. The identification, assessment, management and validation of the unexpected find(s) must be documented by the SQEC in the form of a validation report (or letter/memorandum for minor finds), which should be submitted for review by the Contaminated Land Auditor (if still under Audit) or the EPA.	SQEC
RESUME INTRUSIVE WORK Following successful validation, or as advised by the SQEC (and potentially the EPA), excavation works can resume subject to the ongoing implementation of the UFP.	PC Contractors SQEC

Typical types of contamination that may be encountered during bulk excavations works are shown below.



Photograph 1: Ash layer in soil



Photograph 2: Stained soils



Photograph 3: Bonded asbestos



Photograph 4: Demolition wastes in soil



Photograph 5: Municipal wastes



Photograph 6: Municipal wastes

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20th April 2021 Ref. In-Situ SCR Part of Block 2249 Jerrabomberra

[redacted]
Senior Project Engineer
Lendlease

Dear [redacted]

In-situ Categorisation Report – REV#02
Reuse Request – Block 2249 Jerrabomberra, ACT

1. Introduction

Agon Environmental was commissioned by Lendlease to prepare this in-situ soil categorisation report for up to 3,000m^3 (bulked) of in-situ fill soils (i.e. soils not meeting the definition of VENM) to be excavated to allow the construction of Defence facility at an area of HMAS Harman formerly used for residential accommodation. The fill exhibits poor geotechnical quality and cannot be reused as fill/subgrade within the Base which is undergoing a number of concurrent development projects generating more geotechnical suitable soils for onsite reuse.

At the time of this report, surficial soils and grasses have been grubbed (to a depth of 100mm) and stockpiled separately. A previous investigation was undertaken by Douglas Partners at the site area (refer **Section 2**) and was supplemented by an addition in-situ assessment undertaken by Agon to comply with ACT EPA (2019) Information Sheet 4.

The applicable in-situ assessment data has been compiled to determine the suitability of in-situ soils for offsite reuse as general fill at Mugga 2 Quarry at Block 2252 Jerrabomberra, a letter of acceptance from Remondis who operate the quarry on behalf on ACT NOWaste is included in **Attachment 1**. This reuse site is consistent with those permitted by IF4, that is, reuse is occurring within an industrial land use setting.

Compliance to IF4 is summarised below in **Table 1**, where appropriate the relevant section of the report has been referenced to provide further discussion.

Table 1: Compliance to Information Sheet 4

IF4 Item	Comment	Compliant
REUSE		
IWRG702	Soil Domains were allocated on basis of site history, geology type and a site inspection.	Yes
Sampling Rate	Sample rates were based on Domains, which were derived on the basis of similar soil typology, analyte concentrations and site derived feature.	Yes
SAMPLING AND ANALYSIS		
ASLP	ASLP considered and applied where appropriate.	Yes
Method	Sample method discussed in **Section 4**.	Yes
Laboratory Analysis	Analysis completed at NATA accredited laboratories, **Section 4**.	Yes
ASSESSMENT REPORT		
Site History	Refer **Section 2**. Previous reports available and reviewed.	Yes
Contaminants / Analytes	Adopted based on site history. Justification for analyte selection provided in **Section 4** and complies with IF4.	Yes
Sampling Locations	General grid-based sample locations adopted (refer **Section 4**) to assess the site.	Yes
Sample Rate	Analysis rate appropriate.	Yes
PFAS	PFAS compounds considered and assessed.	Yes
Analysis Results	Tabulated and summarised.	Yes
Laboratory Certificates	Available laboratory certificates provided **Attachment 3**.	Yes
Offsite Reuse	Letter of acceptance received; reuse location complies with IF4 requirements (i.e. industrial land use setting). **See Attachment 1.**	Yes

With reference to IF4, Agon have considered the following regulations and guidance documents in preparation of this report:

- ACT Environmental Protection Act 1997 and Environment Protection Regulation 2005.
- ACT EPA (2017), Contaminated Sites Environment Protection Policy (the CSEPP).
- Australian Government (2018) PFAS National Environmental Management Plan.
- ACT Government (2000), Environment ACT, ACT's Environmental Standards: Assessment & Classification of Liquid & Non-liquid wastes.
- EPA Victoria (2009) Industrial Waste Resource Guidelines (IWRG) 621 Soil Hazard Categorisation and Management.
- EPA Victoria (2009) IWRG701 Sampling and analysis of waters, wastewaters, soils and wastes.
- EPA Victoria (2009) IWRG702 Soil Sampling.
- The National Environmental Protection Measure (NEPM) (Assessment of Site Contamination) (1999, as amended 2013) (ASC NEPM 2013).

2. Site History and Contaminants of Concern

Site History

Agon were provided with a report titled:

- Douglas (2020) Report on Detailed Site Investigation for Contamination. Project Roger, Part Rural Block 2249 Jerrabomberra.

The DSI included the following scope of work:

- History of the site area is as follows:
  - 1952 to 1993 – Area developed exclusively for residential accommodation.
  - 1997 – Residential accommodation buildings were demolished.
  - 1997-2020 – No changes to site area.
- Douglas identified the following potential sources of contamination:
  - Fill – The source of the Fill is unknown.
  - Past and Present Hydrocarbon Storage.
  - Residual Hazardous Building Materials – Within the footprint of the former residential buildings.
  - Historical use of PFAS.
- Advancement of 19 boreholes (Bore 1 to Bore 19), subsurface conditions were logged as follows:
  - *TOPSOIL/TOPSOIL FILL: moist to dry silty clay with rootlets and various anthropogenic materials to depths of 0.1 – 0.3 m.*
  - *GRAVELLY/SILTY CLAY FILL: very stiff, moist to dry, medium plasticity gravelly clay fill in Bores 4, 8, 9 and 13 to depths of 0.15 – 0.6 m.*
  - *SILTY CLAY/CLAY: variably stiff to hard, moist to dry, low to high plasticity clay and silty clay to depths of 0.6 – 1.6m. It is noted that the majority of the basal depths of this strata were logged as extremely weathered dacite.*
  - *DACITE ROCK: initially very low to low strength, highly weathered, highly fractured dacite below depths of 0.9 – 2.0 m, becoming variably low to high strength with depth to the limit of investigation depths of 3.0 – 6.65 m.*
- Analysis of selected soil samples both in Fill and natural soils for the following contaminants:
  - 8 Metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn).
  - TRH / BTEXN.
  - PAH.
  - OCP / OPP.
  - PCBs.
  - Asbestos.
  - PFAS.
- Ultra-trace level detections of PFAS (0.0001 mg/kg) and Asbestos impacts were identified at the following locations:
  - PFAS:
    - Bore 1 - 0.1m
    - Bore 12 – 0.1m
    - Bore 19 - 0.1m
    - Bore 7 – 0.5m
  - Asbestos Fibres:
    - Bore 15 and Bore 2 - 0.1m

Revised Contaminants of Concern

On the basis of the Douglas (2020) DSI Agon have revised the contaminants of concern applicable to Fill at the site area:

- **8 Metals** (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn).
- **TRH / BTEXN**.
- **PAH** – The PAH analytical suite has been adopted to assess for a range of contaminants that may arise from partially combusted organic substances (i.e. ash), chemical additives or crude substances (tar, oils, creosote). PAHs are not usually found singularly but as a mixture of individual chemicals as such Benzo(a)pyrene has not been specifically as a contaminant of concern that would warrant specific analysis (i.e. ultra-trace), rather it is quantified as part of the broader PAH analytical screen.
- **OCP / OPP**.
- **PCBs**.
- **Asbestos** – Visual inspection for bonded cement materials or demolition wastes.

PFAS compounds have been excluded as applicable to the site area on the basis of the following lines of evidence:

- Defence have confirmed that there are no records of PFAS storage or use at HMAS Harman in correspondence with Lendlease.
- HMAS Harman was established as a Defence administrative support facility with no current or historical training activities that involve the use of PFAS (i.e. firefighting). As per Defence (2019) *PFAS Construction and Maintenance Framework Guidance for managing the risks of PFAS contamination for works on the Defence estate:*
    - **Key Messages (pg. II)** - Standard laboratory analysis LOR should be used. These are currently 0.005 mg/kg for soil and sediment, and 0.01 µg/L for water.
    - **Section 1.2.2** – HMAS Harman is not listed on the Defence PFAS Investigation and Management Program website or on the Defence Garrison Estate Management System (GEMS) as having PFAS contamination.
    - **Section 1.2.2** – The framework *does not apply to works occurring in an area on Base where there is no evidence of actual or likely presence of PFAS contamination*.
- Sch 2.2(a)(xi)
- In support of this opinion Agon undertook additional PFAS analysis of samples TP01-0.2, TP02-0.2, TP07-0.5 and TP04-0.5 which verify the absence of PFAS in Fill within the site area – Refer Table 1 **Attachment 1**.

3. Summary of Soil Domains

A description, volume/depth and Domain justification is provided below in **Table 2**.

Table 2: Soil Categorisation Domains

Domain Description	Depth / Vol	Domain Justification
Domain #01 – Fill		
Surficial Fill was removed and stockpiled, remaining in-situ Fill comprised: • GRAVELLY/SILTY CLAY FILL: very stiff, moist to dry, medium plasticity gravelly reworked clay.	Between 0.10 - <0.6mbgl Volume - 3,000m^3	In accordance with IWRG702, the following has been allocated as a single soil Domain: • Comprised of reworked clay Fill consistent across the site area. • Consistent site history being residential land uses. • Consistency in chemical analysis – Douglas 2021).
Domain #02 – In-Situ Natural Soils		
In-situ natural soils comprise: • SILTY CLAY/CLAY: variably stiff to hard, moist to dry, low to high plasticity clay and silty clay to depths of 0.6 – 1.6m. • DACITE ROCK: initially very low to low strength, highly weathered, highly fractured dacite below depths of 0.9 – 2.0 m, becoming variably low to high strength with depth to the limit of investigation depths of 3.0 – 6.65 m.	To be determined in a separate assessment report in accordance with ACT EPA Information Sheet 10	In accordance with IWRG702, the following has been allocated as a single soil Domain: • In-situ natural residual clays and weathered dacite. • Consistent site history being residential land uses. • Consistency in chemical analysis – Douglas 2021).

4. Adequacy of Assessment

In accordance with IF4, Table 3 provides an assessment on the adequacy of the assessment including sample collection, Quality Assurance/Quality Control (QA/QC), analyte selection and sample rate.

Table 3: Adequacy of Assessement

Item	Description
Sample Collection	Samples were collected by Agon via freshly nitrile gloved hand from the test pit sample locations. Bulk undisturbed soil samples untouched by the excavator bucket walls were targeted for sample collection eliminating risk of cross contamination. Samples were sent under chain of custody documentation and in a chilled condition to the receiving NATA Accredited laboratory (Eurofins). Sample collection was in general accordance with the ASC (2013) NEPM, this is compliant with Section 65 of the Environment Protection Regulation 2005.
QA/QC	Agon adopted and reviewed the following QA/QC: • **Intra-laboratory and Inter-laboratory Duplicates**: Overall 5 duplicate pairs (3 intra and 2 inter) were assessed by Douglas and Agon. RPDs were within the acceptable range of <50%. • **Trip Blanks**: 4 Trip Blanks were used by Douglas; results were less than the laboratory detection limit. • **Trip Spikes**: 4 Trip Spikes were used by Douglas (2020); recoveries were within the acceptable range. On the basis of the QA/QC employed during the assessments reviewed by Agon, the accuracy and precision of the soil analysis data is adequate to support the findings of this report.
Sampling Rate	This reuse request relates to 3,000m^3 of in-situ soils, a total of 19 samples have been assessed with an overall analysis rate of 1 sample per 157m^3.
Analysis Rate	The contaminants of concern were analysed at the following rates: • Metals – 19 samples which equates to an analysis rate of 1 per 157m^3. • TRH – 19 samples which equates to an analysis rate of 1 per 157m^3. • BTEXN– 19 samples which equates to an analysis rate of 1 per 157m^3. • PAH – 19 samples which equates to an analysis rate of 1 per 157m^3. • PCB – 19 samples which equates to an analysis rate of 1 per 157m^3. • OPP/OCP – 19 samples which equates to an analysis rate of 1 per 157m^3. • Asbestos – No visual detected indicators of asbestos materials or demolition wastes were observed by Agon. In addition 4 Fill samples were assessed for asbestos fibres. The adopted sample rates are considered appropriate and justified for the purpose of categorising in-situ Fill for the purpose of bulk excavation with consideration of the 95%UCL which allows a sample rate of up to 1 per 250m^3.
Sample Locations	**Figure 1** shows the sample locations advanced for categorisation purposes. The distribution of samples is on a general grid basis across the site and are appropriately stratified through the soil profile (i.e. 0.2, 0.5m), refer **Figure 1**. **Note** – The site surface was grubbed into a stockpile, data from Douglas (2020) at depths of 0.0-0.1m have not been further considered in the dataset.
Summary	On the basis of the discussion provided above Agon consider the environmental assessments (i.e. analytes, sample collection, sample location, sample stratification, QA/QC and sample densities) undertaken at the site appropriate and justified to enable categorisation of in-situ Fill at the site.

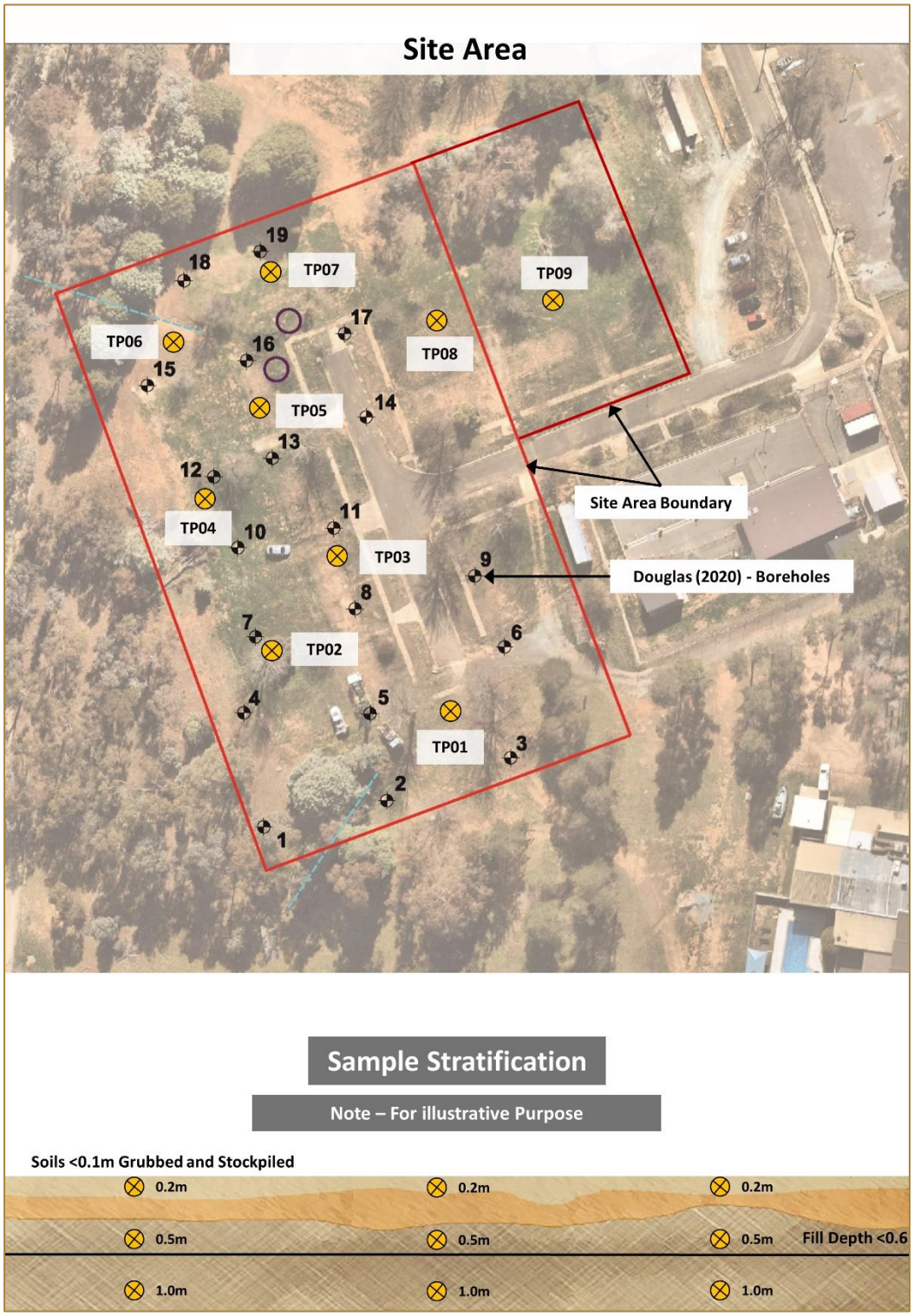


Figure 1: **Sample Location**
Source: **Base image sourced from ACTMapi**

5. Chemical Analysis Results

Current Site Status

At the time of this report, the following soils were removed from the site area and stockpiled separately within HMAS Harman:

- Asbestos impacted surface soils (<0.1m) at Bore 2, Bore 15 and two other areas identified in Douglas (2020) were excavated and stockpiled separately on the base under supervision of a licensed asbestos removalist as asbestos impacted soils. These areas were cleared by a Class A Asbestos Assessor (ACT Asbestos Assessments) and clearance certificate issued.
- All surface soils (boundary to boundary) were grubbed to remove grass and surface soils to a depth of approximately 100mm and are stockpiled separately on the base, these soils are no longer present in the site area.

Remaining In-situ Fill

All soil analysis results within the site were less than the adopted IF4 criteria with the exception of:

- Chromium (Total) – 16 samples reported Chromium between 53 and 130 mg/kg exceeding the IF criterion of 50 mg/kg

Tabulated results are provided as **Attachment 2** (along with calculated 95%UCLs) with corresponding laboratory certificates in **Attachment 3**. Statistical appraisal of the data, of metals with exceedances of IF4, is provided below in **Table 4**.

Table 4: Domain#01 – Statistical Appraisal

Analyte	IF4	No.	Min	Max	Mean	SD	95%UCL	Comment
Arsenic	**20**	19	2.7	16	8.9	3.6	9.30	Compliant IF4
Cadmium	**3**	19	<0.4	<0.4	-	-	-	Compliant IF4
Chromium	**50**	19	32	130	78.6	26.2	89.27	**Exceeds IF4**
Copper	**100**	19	12	44	27.5	10.5	31.77	Compliant IF4
Lead	**100**	19	11	33	19.6	4.8	21.55	Compliant IF4
Mercury	**1**	19	<0.1	<0.1	-	-	-	Compliant IF4
Nickel	**60**	19	6	44	24.4	11.4	29.05	Compliant IF4
Zinc	**200**	19	16	77	50.9	17.5	58.09	Compliant IF4

Statistically the 95%UCL for Chromium exceeded the IF4 criterion. The elevated Chromium concentrations were attributed to the local natural background range of reworked clays present in the Fill layer. To assess the suitability of Fill with naturally elevated Chromium (Total) Agon undertook ASLP analysis for Chromium (VI) which is considered the biggest risk driver. These results were compared to AQUA/4 criterion for the protection of waterways established in the Environment Protection Regulation 2005:

- **Chromium VI (ASLP)** – Leachable values were reported between <0.005 and 0.0.011 mg/L with a statistical mean of 0.006 mg/L marginally exceeding the AQUA/4 criterion of 0.002 mg/L.

Whilst exceedances of AQUA/4 criterion for leachate were identified, the overall risk of soils from the site to impact surface water and/or groundwater via leachate at Mugga 2 Quarry is considered to be low based on the following **Risk Assessment**:

- No human and surface water receptors identified within 500m of the site, no direct contaminant-source-pathway-linkages identified – **Low Risk**.

- Groundwater is estimated to be >20m below the site, no direct contaminant-source-pathway-linkages identified – **Low Risk**.
- Mugga 2 Quarry is clay lined to negate surface water ingress; in addition surface water is directed towards an internal sediment retention dam. No direct contaminant-source-pathway-linkages identified – **Low Risk**.
- Furthermore, the sediment retention dam and two groundwater monitoring wells which are assessed on a 6-monthly basis in accordance with Environmental Authorisation No. 1234.

On the basis of the **Risk Assessment** Agon consider the soils categorised in this report to be suitable for reuse at the Mugga 2 Quarry irrespective of marginal exceedances of IF4 criteria for Chromium (Total).

6. Reuse Site Acceptance

It is proposed that the material will be reused offsite as general fill at Mugga 2 Quarry at Block 2252 Jerrabomberra as general fill. The quarry was specifically established to receive reuse material (as approved by the ACT EPA) and VENM. This reuse setting is consistent with the requirements of IF4, that is reuse is occurring in an industrial land uses setting.

7. Conclusion

Agon conclude that sufficient sampling has occurred to enable categorisation of 3,000m^3 (estimated bulked volume) of Fill (logged at depths <0.6m) present at the site for offsite reuse as general fill at the Mugga 2 Quarry. This conclusion is made subject to the following conditions:

- The material must be placed at the reuse site in accordance with its Environmental Authorisation.
- The implementation of the Unexpected Finds Protocol (UFP) included as **Attachment 4**, during intrusive excavation works. Any vastly different soils (i.e. odorous, stained and/or pockets of anthropogenic inclusions) must be separated and inspected by an environmental consultant.

This report must be submitted, in digital format, to ContaminatedSites@act.gov.au in accordance with the requirements of ACT EPA (2020) Information Sheet 11 *'Environment Protection Authority Report Submission Requirements'*.

Kind regards



ACT Manager

Attachment 1 Letter of Acceptance

From: [redacted]
To:
Subject: RE: Reuse Acceptance - Part of Block 2249 Jerrabomberra
Date: Tuesday, 13 April 2021 1:05:36 PM
Attachments: image001.png
image002.png
image003.png
image004.png
image005.png
image006.png
054-H_and_S-FO-002_Disposal_Form_2020-05-15 M2.pdf

Hi [redacted]

Remondis will accept the 3,000m3 of BRU once approved by the EPA for disposal at Mugga 2 Quarry.

Attached is a disposal form

Regards Steve

From: Canberra
Sent: Tuesday, 13 April 2021 1:02 PM
To: [redacted]@remondis.com.au>
Subject: FW: Reuse Acceptance - Part of Block 2249 Jerrabomberra

From: [redacted]@agonenviro.com.au>
Sent: Tuesday, 13 April 2021 10:11 AM
To: Canberra <Canberra@remondis.com.au>
Cc: [redacted]@lendlease.com>
Subject: Reuse Acceptance - Part of Block 2249 Jerrabomberra

Hi Remondis,

On behalf of Lendlease, could Remondis accept to 3,000m3 of in-situ Fill to be excavated from Part of Block 2249 Jerrabomberra for reuse at the Mugga 2 Quarry. We are facilitating approval from the ACT EPA and require a letter of acceptance.

Cheers,
John

AGON ENVIRONMENTAL
ECAAS ECAAS ECAAS ECAAS
ISO 9001 ISO 14001 AS/NZS 4801 OHSAS 18001 CERTIFIED CERTIFIED CERTIFIED CERTIFIED
Urban Development Institute of Australia SOUTH AUSTRALIA MEMBER

[redacted]
ACT Manager

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Attachment 2 Soil Analysis Results

AGON ENVIRONMENTAL

Table 1
Soil Analytical Results

HMAS Harman

				Metals									PAH			BTEX				TPH		PFAS	Asb
				Arsenic	Cadmium	Chromium	Chromium VI ASLP	Copper	Lead	Mercury	Nickel	Zinc	Benzo(a) pyrene	Naphthalene	PAHs (Sum of total)	Benzene	Ethylbenzene	Toluene	Xylene Total	C6-C9	+C10-C36 (Sum of total)	Sum (PFHxS + PFOS)	Fibre ID
				mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	D/ND
		EQL		4/2	0.4/1	5	0.0005	5	10	0.1	5	2./5	0.5	0.5/0.1	0.5	0.1	0.5/1	0.1	0.3	20	50	<5	-
ACT EPA Information Sheet 4 Table 1				**20**	**3**	**50**	**0.002**	**100**	**100**	**1**	**60**	**200**	**0.2**	**3**	**20**	**1**	**3**	**1**	**14**	**65**	**1000**	**-**	**ND**
Sample ID	Depth	Domain	Date																				
TP01_0.2	0.2	Fill	19/01/2021	12	< 0.4	**87**	**0.006**	28	21	< 0.1	30	55	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	-
TP01_0.5	0.5	Fill	19/01/2021	9.2	< 0.4	**77**	-	30	18	< 0.1	30	51	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
TP02_0.2	0.2	Fill	15/12/2020	3.9	< 0.4	**55**	**0.006**	13	20	< 0.1	13	31	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	-
TP02_0.5	0.5	Fill	17/12/2020	2.7	< 0.4	**85**	-	19	11	< 0.1	20	65	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP03_0.2	0.2	Fill	19/01/2021	5.5	< 0.4	**59**	-	12	16	< 0.1	12	31	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP03_0.5	0.5	Fill	19/01/2021	-	-	**-**	**0.005**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04_0.2	0.2	Fill	7/01/2021	8.9	< 0.4	**73**	-	27	17	< 0.1	26	50	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP05_0.2	0.2	Fill	7/01/2021	12	< 0.4	**130**	**0.005**	34	21	< 0.1	32	54	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP05_0.5	0.5	Fill	19/01/2021	10	< 0.4	**100**	-	37	21	< 0.1	38	60	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP06_0.2	0.2	Fill	19/01/2021	11	< 0.4	**110**	-	42	23	< 0.1	43	74	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP06_0.5	0.5	Fill	19/01/2021	11	< 0.4	**120**	-	43	24	< 0.1	44	77	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP07_0.2	0.2	Fill	7/01/2021	9.3	< 0.4	**100**	**<0.005**	38	21	< 0.1	39	68	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP07_0.5	0.5	Fill	7/01/2021	10	< 0.4	**93**	-	37	21	< 0.1	33	54	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	-
TP08_0.2	0.2	Fill	7/01/2021	14	< 0.4	44	-	23	18	< 0.1	15	34	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP08_0.5	0.5	Fill	7/01/2021	4	< 0.4	**79**	-	25	18	< 0.1	19	64	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
TP09_0.2	0.2	Fill	12/01/2021	16	< 0.4	**53**	**0.011**	23	24	< 0.1	16	52	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP09_0.5	0.5	Fill	12/01/2021	5.2	< 0.4	**89**	-	44	33	< 0.1	23	71	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 2	0.5	Fill	11/08/2020	<4	<0.4	48	-	14	20	<0.1	10	42	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 9	0.5	Fill	11/08/2020	7	<0.4	32	-	12	13	<0.1	6	16	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
Bore 15	0.5	Fill	11/08/2020	<4	<0.4	**59**	-	21	12	<0.1	15	19	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
TP01_1.0	1.0	Natural	7/01/2021	7.8	< 0.4	**79**	-	27	14	< 0.1	34	50	-	-	-	-	-	-	-	-	-	-	-
TP01_2.0	2.0	Natural	14/12/2020	5.2	< 0.4	**66**	-	19	8.6	< 0.1	25	51	-	-	-	-	-	-	-	-	-	-	-
TP02_1.0	1.0	Natural	7/01/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02_2.0	2.0	Natural	19/01/2021	2.7	< 0.4	**91**	-	18	14	< 0.1	20	68	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP03_0.5	0.5	Natural	19/01/2021	3.1	< 0.4	**100**	-	24	12	< 0.1	30	77	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP04_0.5	0.5	Natural	7/01/2021	11	< 0.4	**99**	-	38	19	< 0.1	42	65	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<5	N.D
TP04_1.0	1.0	Natural	7/01/2021	7.1	< 0.4	**98**	-	36	16	< 0.1	38	60	-	-	-	-	-	-	-	-	-	-	-
TP05_1.0	1.0	Natural	19/01/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06_1.0	1.0	Natural	7/01/2021	8.2	< 0.4	**100**	-	33	23	< 0.1	35	62	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP07_1.0	1.0	Natural	7/01/2021	7.3	< 0.4	**100**	-	29	19	0.1	30	43	-	-	-	-	-	-	-	-	-	-	-
TP08_1.0	1.0	Natural	12/01/2021	4.5	< 0.4	**62**	-	27	13	< 0.1	22	63	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
TP09_1.0	1.0	Natural	12/01/2021	5.2	< 0.4	**79**	-	29	28	< 0.1	23	82	-	-	-	-	-	-	-	-	-	-	-
Bore 4	3.0	Natural	11/08/2020	<4	<0.4	49	-	8	6	<0.1	14	52	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 6	1.0	Natural	11/08/2020	5	<0.4	46	-	17	9	<0.1	16	31	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 13	4.0	Natural	11/08/2020	<4	<0.4	45	-	14	7	<0.1	13	46	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 17	1.0	Natural	11/08/2020	<4	<0.4	35	-	14	6	<0.1	13	18	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Bore 19	2.0	Natural	11/08/2020	<4	<0.4	43	-	14	34	<0.1	10	58	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	N.D
QC101		QA/QC	12/01/2021	2.3	< 0.4	**120**	-	24	11	< 0.1	24	81	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	<LOR	-	-
Statistics																							
Minimum Concentration				2.7	-	32.0	0.0050	12.0	11.0	0.1	6.0	16.0	-	-	-	-	-	-	-	-	-	-	-
Maximum Concentration				16.0	-	130.0	0.0110	44.0	33.0	0.1	44.0	77.0	-	-	-	-	-	-	-	-	-	-	-
Average Concentration *				8.9	-	78.6	0.0066	27.5	19.6	0.1	24.4	50.9	-	-	-	-	-	-	-	-	-	-	-
Standard Deviation *				3.6	-	26.2	0.0022	10.5	4.8	0.0	11.4	17.5	-	-	-	-	-	-	-	-	-	-	-

1	**UCL Statistics for Uncensored Full Data Sets**										
2											
3	User Selected Options										
4	Date/Time of Computation	ProUCL 5.130/03/2021 7:01:53 PM									
5	From File	WorkSheet.xls									
6	Full Precision	OFF									
7	Confidence Coefficient	95%									
8	Number of Bootstrap Operations	2000									
9											
10											
11	**Arsenic**										
12											
13	**General Statistics**										
14	Total Number of Observations	19				Number of Distinct Observations	14				
15						Number of Missing Observations	0				
16	Minimum	2.7				Mean	8.405				
17	Maximum	16				Median	9.2				
18	SD	3.85				Std. Error of Mean	0.883				
19	Coefficient of Variation	0.458				Skewness	0.17				
20											
21	**Normal GOF Test**										
22	Shapiro Wilk Test Statistic	0.942				**Shapiro Wilk GOF Test**					
23	5% Shapiro Wilk Critical Value	0.901				Data appear Normal at 5% Significance Level					
24	Lilliefors Test Statistic	0.143				**Lilliefors GOF Test**					
25	5% Lilliefors Critical Value	0.197				Data appear Normal at 5% Significance Level					
26	**Data appear Normal at 5% Significance Level**										
27											
28	**Assuming Normal Distribution**										
29	**95% Normal UCL**					**95% UCLs (Adjusted for Skewness)**					
30	95% Student's-t UCL	9.937				95% Adjusted-CLT UCL (Chen-1995)	9.895				
31						95% Modified-t UCL (Johnson-1978)	9.943				
32											
33	**Gamma GOF Test**										
34	A-D Test Statistic	0.629				**Anderson-Darling Gamma GOF Test**					
35	5% A-D Critical Value	0.744				Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic	0.189				**Kolmogorov-Smirnov Gamma GOF Test**					
37	5% K-S Critical Value	0.199				Detected data appear Gamma Distributed at 5% Significance Level					
38	**Detected data appear Gamma Distributed at 5% Significance Level**										
39											
40	**Gamma Statistics**										
41	k hat (MLE)	4.443				k star (bias corrected MLE)	3.776				
42	Theta hat (MLE)	1.892				Theta star (bias corrected MLE)	2.226				
43	nu hat (MLE)	168.8				nu star (bias corrected)	143.5				
44	MLE Mean (bias corrected)	8.405				MLE Sd (bias corrected)	4.325				
45						Approximate Chi Square Value (0.05)	116.8				
46	Adjusted Level of Significance	0.0369				Adjusted Chi Square Value	114.7				
47											
48	**Assuming Gamma Distribution**										
49	95% Approximate Gamma UCL (use when n>=50))	10.33				95% Adjusted Gamma UCL (use when n<50)	10.51				
50											
51	**Lognormal GOF Test**										
52	Shapiro Wilk Test Statistic	0.919				**Shapiro Wilk Lognormal GOF Test**					
53	5% Shapiro Wilk Critical Value	0.901				Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic	0.21				**Lilliefors Lognormal GOF Test**					
55	5% Lilliefors Critical Value	0.197				Data Not Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L
56	**Data appear Approximate Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59					Minimum of Logged Data	0.993			Mean of logged Data			2.012
60					Maximum of Logged Data	2.773			SD of logged Data			0.52
61												
62	**Assuming Lognormal Distribution**											
63					95% H-UCL	10.98			90% Chebyshev (MVUE) UCL			11.65
64					95% Chebyshev (MVUE) UCL	13.09			97.5% Chebyshev (MVUE) UCL			15.07
65					99% Chebyshev (MVUE) UCL	18.97						
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
69												
70	**Nonparametric Distribution Free UCLs**											
71					95% CLT UCL	9.858			95% Jackknife UCL			9.937
72					95% Standard Bootstrap UCL	9.815			95% Bootstrap-t UCL			10.03
73					95% Hall's Bootstrap UCL	9.903			95% Percentile Bootstrap UCL			9.858
74					95% BCA Bootstrap UCL	9.826						
75					90% Chebyshev(Mean, Sd) UCL	11.06			95% Chebyshev(Mean, Sd) UCL			12.26
76					97.5% Chebyshev(Mean, Sd) UCL	13.92			99% Chebyshev(Mean, Sd) UCL			17.19
77												
78	**Suggested UCL to Use**											
79					95% Student's-t UCL	9.937						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86												
87	**Chromium**											
88												
89	**General Statistics**											
90					Total Number of Observations	19			Number of Distinct Observations			17
91									Number of Missing Observations			0
92					Minimum	32			Mean			78.58
93					Maximum	130			Median			79
94					SD	26.88			Std. Error of Mean			6.166
95					Coefficient of Variation	0.342			Skewness			0.149
96												
97	**Normal GOF Test**											
98					Shapiro Wilk Test Statistic	0.979			**Shapiro Wilk GOF Test**			
99					5% Shapiro Wilk Critical Value	0.901			Data appear Normal at 5% Significance Level			
100					Lilliefors Test Statistic	0.135			**Lilliefors GOF Test**			
101					5% Lilliefors Critical Value	0.197			Data appear Normal at 5% Significance Level			
102	**Data appear Normal at 5% Significance Level**											
103												
104	**Assuming Normal Distribution**											
105	**95% Normal UCL**								**95% UCLs (Adjusted for Skewness)**			
106					95% Student's-t UCL	89.27			95% Adjusted-CLT UCL (Chen-1995)			88.95
107									95% Modified-t UCL (Johnson-1978)			89.31
108												
109	**Gamma GOF Test**											
110					A-D Test Statistic	0.231			**Anderson-Darling Gamma GOF Test**			

	A	B	C	D	E	F	G	H	I	J	K	L
111				5% A-D Critical Value		0.742	Detected data appear Gamma Distributed at 5% Significance Level					
112				K-S Test Statistic		0.117	**Kolmogorov-Smirnov Gamma GOF Test**					
113				5% K-S Critical Value		0.199	Detected data appear Gamma Distributed at 5% Significance Level					
114	**Detected data appear Gamma Distributed at 5% Significance Level**											
115												
116	**Gamma Statistics**											
117				k hat (MLE)		8.319	k star (bias corrected MLE)					7.041
118				Theta hat (MLE)		9.446	Theta star (bias corrected MLE)					11.16
119				nu hat (MLE)		316.1	nu star (bias corrected)					267.5
120				MLE Mean (bias corrected)		78.58	MLE Sd (bias corrected)					29.61
121							Approximate Chi Square Value (0.05)					230.7
122				Adjusted Level of Significance		0.0369	Adjusted Chi Square Value					227.7
123												
124	**Assuming Gamma Distribution**											
125				95% Approximate Gamma UCL (use when n>=50))		91.14	95% Adjusted Gamma UCL (use when n<50)					92.34
126												
127	**Lognormal GOF Test**											
128				Shapiro Wilk Test Statistic		0.964	**Shapiro Wilk Lognormal GOF Test**					
129				5% Shapiro Wilk Critical Value		0.901	Data appear Lognormal at 5% Significance Level					
130				Lilliefors Test Statistic		0.123	**Lilliefors Lognormal GOF Test**					
131				5% Lilliefors Critical Value		0.197	Data appear Lognormal at 5% Significance Level					
132	**Data appear Lognormal at 5% Significance Level**											
133												
134	**Lognormal Statistics**											
135				Minimum of Logged Data		3.466	Mean of logged Data					4.303
136				Maximum of Logged Data		4.868	SD of logged Data					0.372
137												
138	**Assuming Lognormal Distribution**											
139				95% H-UCL		93.54	90% Chebyshev (MVUE) UCL					99.5
140				95% Chebyshev (MVUE) UCL		108.8	97.5% Chebyshev (MVUE) UCL					121.8
141				99% Chebyshev (MVUE) UCL		147.2						
142												
143	**Nonparametric Distribution Free UCL Statistics**											
144	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
145												
146	**Nonparametric Distribution Free UCLs**											
147				95% CLT UCL		88.72	95% Jackknife UCL					89.27
148				95% Standard Bootstrap UCL		88.8	95% Bootstrap-t UCL					89.76
149				95% Hall's Bootstrap UCL		89.57	95% Percentile Bootstrap UCL					88.47
150				95% BCA Bootstrap UCL		88.79						
151				90% Chebyshev(Mean, Sd) UCL		97.08	95% Chebyshev(Mean, Sd) UCL					105.5
152				97.5% Chebyshev(Mean, Sd) UCL		117.1	99% Chebyshev(Mean, Sd) UCL					139.9
153												
154	**Suggested UCL to Use**											
155				95% Student's-t UCL		89.27						
156												
157	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
158	Recommendations are based upon data size, data distribution, and skewness.											
159	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
160	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
161												
162												
163	**Copper**											
164												
165	**General Statistics**											

166				Total Number of Observations		19				Number of Distinct Observations		16
167										Number of Missing Observations		0
168				Minimum		12				Mean		27.47
169				Maximum		44				Median		27
170				SD		10.79				Std. Error of Mean		2.476
171				Coefficient of Variation		0.393				Skewness		0.0271
172												
173						**Normal GOF Test**						
174				Shapiro Wilk Test Statistic		0.936				**Shapiro Wilk GOF Test**		
175				5% Shapiro Wilk Critical Value		0.901				Data appear Normal at 5% Significance Level		
176				Lilliefors Test Statistic		0.127				**Lilliefors GOF Test**		
177				5% Lilliefors Critical Value		0.197				Data appear Normal at 5% Significance Level		
178						**Data appear Normal at 5% Significance Level**						
179												
180						**Assuming Normal Distribution**						
181				**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**		
182				95% Student's-t UCL		31.77				95% Adjusted-CLT UCL (Chen-1995)		31.56
183										95% Modified-t UCL (Johnson-1978)		31.77
184												
185						**Gamma GOF Test**						
186				A-D Test Statistic		0.441				**Anderson-Darling Gamma GOF Test**		
187				5% A-D Critical Value		0.742				Detected data appear Gamma Distributed at 5% Significance Level		
188				K-S Test Statistic		0.133				**Kolmogorov-Smirnov Gamma GOF Test**		
189				5% K-S Critical Value		0.199				Detected data appear Gamma Distributed at 5% Significance Level		
190						**Detected data appear Gamma Distributed at 5% Significance Level**						
191												
192						**Gamma Statistics**						
193				k hat (MLE)		6.097				k star (bias corrected MLE)		5.169
194				Theta hat (MLE)		4.506				Theta star (bias corrected MLE)		5.315
195				nu hat (MLE)		231.7				nu star (bias corrected)		196.4
196				MLE Mean (bias corrected)		27.47				MLE Sd (bias corrected)		12.08
197										Approximate Chi Square Value (0.05)		165
198				Adjusted Level of Significance		0.0369				Adjusted Chi Square Value		162.5
199												
200						**Assuming Gamma Distribution**						
201				95% Approximate Gamma UCL (use when n>=50))		32.71				95% Adjusted Gamma UCL (use when n<50)		33.21
202												
203						**Lognormal GOF Test**						
204				Shapiro Wilk Test Statistic		0.913				**Shapiro Wilk Lognormal GOF Test**		
205				5% Shapiro Wilk Critical Value		0.901				Data appear Lognormal at 5% Significance Level		
206				Lilliefors Test Statistic		0.124				**Lilliefors Lognormal GOF Test**		
207				5% Lilliefors Critical Value		0.197				Data appear Lognormal at 5% Significance Level		
208						**Data appear Lognormal at 5% Significance Level**						
209												
210						**Lognormal Statistics**						
211				Minimum of Logged Data		2.485				Mean of logged Data		3.229
212				Maximum of Logged Data		3.784				SD of logged Data		0.439
213												
214						**Assuming Lognormal Distribution**						
215				95% H-UCL		34.04				90% Chebyshev (MVUE) UCL		36.25
216				95% Chebyshev (MVUE) UCL		40.14				97.5% Chebyshev (MVUE) UCL		45.54
217				99% Chebyshev (MVUE) UCL		56.16						
218												
219						**Nonparametric Distribution Free UCL Statistics**						
220						**Data appear to follow a Discernible Distribution at 5% Significance Level**						

221											
222	**Nonparametric Distribution Free UCLs**										
223				95% CLT UCL	31.55			95% Jackknife UCL	31.77		
224				95% Standard Bootstrap UCL	31.44			95% Bootstrap-t UCL	31.75		
225				95% Hall's Bootstrap UCL	31.57			95% Percentile Bootstrap UCL	31.58		
226				95% BCA Bootstrap UCL	31.26						
227				90% Chebyshev(Mean, Sd) UCL	34.9			95% Chebyshev(Mean, Sd) UCL	38.27		
228				97.5% Chebyshev(Mean, Sd) UCL	42.94			99% Chebyshev(Mean, Sd) UCL	52.11		
229											
230	**Suggested UCL to Use**										
231				95% Student's-t UCL	31.77						
232											
233	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.										
234	Recommendations are based upon data size, data distribution, and skewness.										
235	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).										
236	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.										
237											
238											
239	**Lead**										
240											
241	**General Statistics**										
242				Total Number of Observations	19			Number of Distinct Observations	11		
243								Number of Missing Observations	0		
244				Minimum	11			Mean	19.58		
245				Maximum	33			Median	20		
246				SD	4.959			Std. Error of Mean	1.138		
247				Coefficient of Variation	0.253			Skewness	0.62		
248											
249	**Normal GOF Test**										
250				Shapiro Wilk Test Statistic	0.926			**Shapiro Wilk GOF Test**			
251				5% Shapiro Wilk Critical Value	0.901			Data appear Normal at 5% Significance Level			
252				Lilliefors Test Statistic	0.177			**Lilliefors GOF Test**			
253				5% Lilliefors Critical Value	0.197			Data appear Normal at 5% Significance Level			
254	**Data appear Normal at 5% Significance Level**										
255											
256	**Assuming Normal Distribution**										
257				**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**			
258				95% Student's-t UCL	21.55			95% Adjusted-CLT UCL (Chen-1995)	21.62		
259								95% Modified-t UCL (Johnson-1978)	21.58		
260											
261	**Gamma GOF Test**										
262				A-D Test Statistic	0.571			**Anderson-Darling Gamma GOF Test**			
263				5% A-D Critical Value	0.741			Detected data appear Gamma Distributed at 5% Significance Level			
264				K-S Test Statistic	0.146			**Kolmogorov-Smirnov Gamma GOF Test**			
265				5% K-S Critical Value	0.198			Detected data appear Gamma Distributed at 5% Significance Level			
266	**Detected data appear Gamma Distributed at 5% Significance Level**										
267											
268	**Gamma Statistics**										
269				k hat (MLE)	16.33			k star (bias corrected MLE)	13.78		
270				Theta hat (MLE)	1.199			Theta star (bias corrected MLE)	1.42		
271				nu hat (MLE)	620.4			nu star (bias corrected)	523.8		
272				MLE Mean (bias corrected)	19.58			MLE Sd (bias corrected)	5.273		
273								Approximate Chi Square Value (0.05)	471.7		
274				Adjusted Level of Significance	0.0369			Adjusted Chi Square Value	467.4		
275											

276	**Assuming Gamma Distribution**											
277	95% Approximate Gamma UCL (use when n>=50))				21.74	95% Adjusted Gamma UCL (use when n<50)					21.94	
278												
279	**Lognormal GOF Test**											
280	Shapiro Wilk Test Statistic				0.935	**Shapiro Wilk Lognormal GOF Test**						
281	5% Shapiro Wilk Critical Value				0.901	Data appear Lognormal at 5% Significance Level						
282	Lilliefors Test Statistic				0.159	**Lilliefors Lognormal GOF Test**						
283	5% Lilliefors Critical Value				0.197	Data appear Lognormal at 5% Significance Level						
284	**Data appear Lognormal at 5% Significance Level**											
285												
286	**Lognormal Statistics**											
287	Minimum of Logged Data				2.398	Mean of logged Data					2.944	
288	Maximum of Logged Data				3.497	SD of logged Data					0.259	
289												
290	**Assuming Lognormal Distribution**											
291	95% H-UCL				21.94	90% Chebyshev (MVUE) UCL					23.13	
292	95% Chebyshev (MVUE) UCL				24.73	97.5% Chebyshev (MVUE) UCL					26.95	
293	99% Chebyshev (MVUE) UCL				31.31							
294												
295	**Nonparametric Distribution Free UCL Statistics**											
296	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
297												
298	**Nonparametric Distribution Free UCLs**											
299	95% CLT UCL				21.45	95% Jackknife UCL					21.55	
300	95% Standard Bootstrap UCL				21.39	95% Bootstrap-t UCL					21.75	
301	95% Hall's Bootstrap UCL				22.14	95% Percentile Bootstrap UCL					21.42	
302	95% BCA Bootstrap UCL				21.58							
303	90% Chebyshev(Mean, Sd) UCL				22.99	95% Chebyshev(Mean, Sd) UCL					24.54	
304	97.5% Chebyshev(Mean, Sd) UCL				26.68	99% Chebyshev(Mean, Sd) UCL					30.9	
305												
306	**Suggested UCL to Use**											
307	95% Student's-t UCL				21.55							
308												
309	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
310	Recommendations are based upon data size, data distribution, and skewness.											
311	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
312	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
313												
314												
315	**Nickel**											
316												
317	**General Statistics**											
318	Total Number of Observations				19	Number of Distinct Observations					17	
319						Number of Missing Observations					0	
320	Minimum				6	Mean					24.42	
321	Maximum				44	Median					23	
322	SD				11.67	Std. Error of Mean					2.678	
323	Coefficient of Variation				0.478	Skewness					0.225	
324												
325	**Normal GOF Test**											
326	Shapiro Wilk Test Statistic				0.95	**Shapiro Wilk GOF Test**						
327	5% Shapiro Wilk Critical Value				0.901	Data appear Normal at 5% Significance Level						
328	Lilliefors Test Statistic				0.133	**Lilliefors GOF Test**						
329	5% Lilliefors Critical Value				0.197	Data appear Normal at 5% Significance Level						
330	**Data appear Normal at 5% Significance Level**											

331												
332	**Assuming Normal Distribution**											
333	**95% Normal UCL**						**95% UCLs (Adjusted for Skewness)**					
334				95% Student's-t UCL		29.06				95% Adjusted-CLT UCL (Chen-1995)		28.97
335										95% Modified-t UCL (Johnson-1978)		29.09
336												
337	**Gamma GOF Test**											
338				A-D Test Statistic		0.293	**Anderson-Darling Gamma GOF Test**					
339				5% A-D Critical Value		0.745	Detected data appear Gamma Distributed at 5% Significance Level					
340				K-S Test Statistic		0.144	**Kolmogorov-Smirnov Gamma GOF Test**					
341				5% K-S Critical Value		0.199	Detected data appear Gamma Distributed at 5% Significance Level					
342	**Detected data appear Gamma Distributed at 5% Significance Level**											
343												
344	**Gamma Statistics**											
345				k hat (MLE)		4.06				k star (bias corrected MLE)		3.454
346				Theta hat (MLE)		6.016				Theta star (bias corrected MLE)		7.071
347				nu hat (MLE)		154.3				nu star (bias corrected)		131.2
348				MLE Mean (bias corrected)		24.42				MLE Sd (bias corrected)		13.14
349										Approximate Chi Square Value (0.05)		105.8
350				Adjusted Level of Significance		0.0369				Adjusted Chi Square Value		103.8
351												
352	**Assuming Gamma Distribution**											
353				95% Approximate Gamma UCL (use when n>=50))		30.3				95% Adjusted Gamma UCL (use when n<50)		30.88
354												
355	**Lognormal GOF Test**											
356				Shapiro Wilk Test Statistic		0.947	**Shapiro Wilk Lognormal GOF Test**					
357				5% Shapiro Wilk Critical Value		0.901	Data appear Lognormal at 5% Significance Level					
358				Lilliefors Test Statistic		0.149	**Lilliefors Lognormal GOF Test**					
359				5% Lilliefors Critical Value		0.197	Data appear Lognormal at 5% Significance Level					
360	**Data appear Lognormal at 5% Significance Level**											
361												
362	**Lognormal Statistics**											
363				Minimum of Logged Data		1.792				Mean of logged Data		3.067
364				Maximum of Logged Data		3.784				SD of logged Data		0.55
365												
366	**Assuming Lognormal Distribution**											
367				95% H-UCL		32.64				90% Chebyshev (MVUE) UCL		34.55
368				95% Chebyshev (MVUE) UCL		38.98				97.5% Chebyshev (MVUE) UCL		45.13
369				99% Chebyshev (MVUE) UCL		57.21						
370												
371	**Nonparametric Distribution Free UCL Statistics**											
372	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
373												
374	**Nonparametric Distribution Free UCLs**											
375				95% CLT UCL		28.83				95% Jackknife UCL		29.06
376				95% Standard Bootstrap UCL		28.72				95% Bootstrap-t UCL		29.31
377				95% Hall's Bootstrap UCL		28.8				95% Percentile Bootstrap UCL		29.05
378				95% BCA Bootstrap UCL		28.68						
379				90% Chebyshev(Mean, Sd) UCL		32.45				95% Chebyshev(Mean, Sd) UCL		36.09
380				97.5% Chebyshev(Mean, Sd) UCL		41.14				99% Chebyshev(Mean, Sd) UCL		51.07
381												
382	**Suggested UCL to Use**											
383				95% Student's-t UCL		29.06						
384												
385	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											

386	Recommendations are based upon data size, data distribution, and skewness.											
387	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
388	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
389												
390												
391	**Zinc**											
392												
393	**General Statistics**											
394						Total Number of Observations	19			Number of Distinct Observations	17	
395										Number of Missing Observations	0	
396						Minimum	16			Mean	50.95	
397						Maximum	77			Median	54	
398						SD	17.94			Std. Error of Mean	4.116	
399						Coefficient of Variation	0.352			Skewness	-0.515	
400												
401	**Normal GOF Test**											
402						Shapiro Wilk Test Statistic	0.947			**Shapiro Wilk GOF Test**		
403						5% Shapiro Wilk Critical Value	0.901			Data appear Normal at 5% Significance Level		
404						Lilliefors Test Statistic	0.163			**Lilliefors GOF Test**		
405						5% Lilliefors Critical Value	0.197			Data appear Normal at 5% Significance Level		
406	**Data appear Normal at 5% Significance Level**											
407												
408	**Assuming Normal Distribution**											
409						**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**		
410						95% Student's-t UCL	58.09			95% Adjusted-CLT UCL (Chen-1995)	57.2	
411										95% Modified-t UCL (Johnson-1978)	58	
412												
413	**Gamma GOF Test**											
414						A-D Test Statistic	0.732			**Anderson-Darling Gamma GOF Test**		
415						5% A-D Critical Value	0.742			Detected data appear Gamma Distributed at 5% Significance Level		
416						K-S Test Statistic	0.218			**Kolmogorov-Smirnov Gamma GOF Test**		
417						5% K-S Critical Value	0.199			Data Not Gamma Distributed at 5% Significance Level		
418	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
419												
420	**Gamma Statistics**											
421						k hat (MLE)	6.504			k star (bias corrected MLE)	5.512	
422						Theta hat (MLE)	7.833			Theta star (bias corrected MLE)	9.243	
423						nu hat (MLE)	247.2			nu star (bias corrected)	209.5	
424						MLE Mean (bias corrected)	50.95			MLE Sd (bias corrected)	21.7	
425										Approximate Chi Square Value (0.05)	177	
426						Adjusted Level of Significance	0.0369			Adjusted Chi Square Value	174.4	
427												
428	**Assuming Gamma Distribution**											
429						95% Approximate Gamma UCL (use when n>=50))	60.3			95% Adjusted Gamma UCL (use when n<50)	61.2	
430												
431	**Lognormal GOF Test**											
432						Shapiro Wilk Test Statistic	0.865			**Shapiro Wilk Lognormal GOF Test**		
433						5% Shapiro Wilk Critical Value	0.901			Data Not Lognormal at 5% Significance Level		
434						Lilliefors Test Statistic	0.238			**Lilliefors Lognormal GOF Test**		
435						5% Lilliefors Critical Value	0.197			Data Not Lognormal at 5% Significance Level		
436	**Data Not Lognormal at 5% Significance Level**											
437												
438	**Lognormal Statistics**											
439						Minimum of Logged Data	2.773			Mean of logged Data	3.852	
440						Maximum of Logged Data	4.344			SD of logged Data	0.444	

	A	B	C	D	E	F	G	H	I	J	K	L
441												
442	**Assuming Lognormal Distribution**											
443					95% H-UCL	63.77			90% Chebyshev (MVUE) UCL			67.9
444					95% Chebyshev (MVUE) UCL	75.25			97.5% Chebyshev (MVUE) UCL			85.46
445					99% Chebyshev (MVUE) UCL	105.5						
446												
447	**Nonparametric Distribution Free UCL Statistics**											
448	**Data appear to follow a Discernible Distribution at 5% Significance Level**											
449												
450	**Nonparametric Distribution Free UCLs**											
451					95% CLT UCL	57.72			95% Jackknife UCL			58.09
452					95% Standard Bootstrap UCL	57.79			95% Bootstrap-t UCL			57.88
453					95% Hall's Bootstrap UCL	57.23			95% Percentile Bootstrap UCL			57.68
454					95% BCA Bootstrap UCL	56.89						
455					90% Chebyshev(Mean, Sd) UCL	63.3			95% Chebyshev(Mean, Sd) UCL			68.89
456					97.5% Chebyshev(Mean, Sd) UCL	76.65			99% Chebyshev(Mean, Sd) UCL			91.9
457												
458	**Suggested UCL to Use**											
459					95% Student's-t UCL	58.09						
460												
461	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
462	Recommendations are based upon data size, data distribution, and skewness.											
463	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
464	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
465												
466	**Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be**											
467	**reliable. Chen's and Johnson's methods provide adjustments for positvely skewed data sets.**											
468												

Attachment 3 Laboratory Certificates

CHAIN OF CUSTODY RECORD

☑ Sydney Laboratory
Unit F3 Bld F, 16 Mars Rd Lane Cove West, NSW 2066

☐ Ibsane Laboratory
Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000

Company	Agon	Project №	-	Project Manager	JO
Address	4/10 Kennedy St Kingston	Project Name	HMA	EDD Format (ESdat, EQuIS, Custom)	ESDAT
Contact Name				Sampler(s)	OP/JO
Phone №				Handed over by	J.O
Special Directions	For Metals Analysis - 50g sample to be dryed, passed through a 2mm sieve, crushed and homogenised prior to metals analysis			Email for Invoice	agonenviro.com.au; finance@agonenviro.com.au;
Purchase Order				Email for Results	agonenviro.com.au
Quote ID №	Quotation # 190123AEGA				

Analyses (Mark where tests are required, please specify "Total" or "Filtered" if applicable. Unpreserved bottle will be used for soil analysis if preservative not specified)

Containers

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

☐ Overnight (8am)*
☐ 1 Day*
☑ 2 Day*
☐ 3 Day*
☐ 5 Day
* Surcharges apply
☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals - See Special Instructions	RS Suite (8 Metals, No Fluoride or Cyanide) - See Special Instructions	Asbestos ID	PFAS Short Suite Standard LOR	Jar (Glass)	Jar (HDPE)	Bag 500ml_ACM	Bag Add Sulphate Soil	Small plastic bottle	Vial (headspace)	Plastic bottle (preservative)	Amber bottle	Sample Comments / Dangerous Goods Hazard Warning
1	TP01_0.2	19.3.21	S				X									
2	TP01_0.5	19.3.21	S													
3	TP01_1.0	19.3.21	S													
4	TP01_2.0	19.3.21	S													
5	TP02_0.2	19.3.21	S				X									
6	TP02_0.5	19.3.21	S													
7	TP02_1.0	19.3.21	S													
8	TP02_2.0	19.3.21	S													
9	TP03_0.2	19.3.21	S													
10	TP03_0.5	19.3.21	S													
11	TP04_0.2	19.3.21	S													
12	TP04_0.5	19.3.21	S													
13	TP04_1.0	19.3.21	S													
14	TP05_0.2	19.3.21	S													
15	TP05_0.5	19.3.21	S				X									
16	TP05_1.0	19.3.21	S													
17	TP06_0.2	19.3.21	S													
18	TP06_0.5	19.3.21	S													
19	TP06_1.0	19.3.21	S													
20	TP07_0.2	19.3.21	S													
21	TP07_0.5	19.3.21	S				X									
22	TP07_1.0	19.3.21	S													
23	TP08_0.2	19.3.21	S													
24	TP08_0.5	19.3.21	S													
25	TP08_1.0	19.3.21	S													
26	TP09_0.2	19.3.21	S													
27	TP09_0.5	19.3.21	S													
28	TP09_1.0	19.3.21	S													
29	QC101	19.3.21	S													
13																
16																
14																
11																
44																

RCVD: [redacted]
23/3 10.33AM

#782134

CHAIN OF CUSTODY RECORD

☑ Sydney Laboratory
Unit P3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh
03 8564 9000

Company	Agon	Project No	-
Address	4/10 Kennedy St Kingston	Project Name	HMA
Contact Name			
Phone No			
Special Directions	For Metals Analysis - 50g sample to be dryed, passed through a 2mm sieve, crushed and homogenised prior to metals analysis		
Purchase Order			
Quote ID No	Quotation # 190123AEGA		

Project Manager	JO	Sampler(s)	OP/JO
EDD Format (ESdat, EQuIS, Custom)	ESDAT	Handed over by	J.O
		Email for Invoice	@agonenviro.com.au; finance@agonenviro.com.au;
		Email for Results	@agonenviro.com.au

Analysis (Note: Whenever possible please specify "Over" or "Stand" soil guidelines and to which depth)

No	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	6 Metals - See Special Instructions	R6 Suite (6 Metals, No Fluorides or Cyanide) - See Special Instructions	Asbestos ID	PFAS Standard LOR
1	TP01_0.2	19.3.21	S		X		
2	TP01_0.5	19.3.21	S		X	X	
3	TP01_1.0	19.3.21	S	X			
4	TP01_2.0	19.3.21	S	X			
5	TP02_0.2	19.3.21	S		X		
6	TP02_0.5	19.3.21	S		X		
7	TP02_1.0	19.3.21	S				
8	TP02_2.0	19.3.21	S		X		
9	TP03_0.2	19.3.21	S		X		
10	TP03_0.5	19.3.21	S		X		
11	TP04_0.2	19.3.21	S		X		
12	TP04_0.5	19.3.21	S		X	X	
13	TP04_1.0	19.3.21	S	X			
14	TP05_0.2	19.3.21	S		X		
15	TP05_0.5	19.3.21	S		X		
16	TP05_1.0	19.3.21	S				
17	TP06_0.2	19.3.21	S		X		
18	TP06_0.5	19.3.21	S		X		
19	TP06_1.0	19.3.21	S		X		
20	TP07_0.2	19.3.21	S		X		
21	TP07_0.5	19.3.21	S		X		
22	TP07_1.0	19.3.21	S	X			
23	TP08_0.2	19.3.21	S		X		
24	TP08_0.5	19.3.21	S		X	X	
25	TP08_1.0	19.3.21	S		X		
26	TP09_0.2	19.3.21	S		X		
27	TP09_0.5	19.3.21	S		X		
28	TP09_1.0	19.3.21	S	X			
29	QC101	19.3.21	S		X		
15							
16							
14							
14							
14							

Containers: Jar (Glass) | Jar (HDPE) | Bag 500mL ACM | Bag Acid Sulphate Soil | Small plastic bottle | Vial (zero headspace) | Plastic bottle (inorganics) | Amber bottle

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

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

Sample Comments / Dangerous Goods Hazard Warning

23/3

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

Attention:	
Report	782134-AID
Project Name	HMA
Received Date	Mar 22, 2021
Date Reported	Mar 25, 2021

Methodology:

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

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.

Project Name HMA
Project ID
Date Sampled Mar 19, 2021
Report 782134-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP01_0.5	21-Ma40648	Mar 19, 2021	Approximate Sample 45g Sample consisted of: Red-brown coarse-grained clayey soil	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP04_0.5	21-Ma40658	Mar 19, 2021	Approximate Sample 49g Sample consisted of: Red-brown coarse-grained clayey soil	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP08_0.5	21-Ma40670	Mar 19, 2021	Approximate Sample 52g Sample consisted of: Brown coarse-grained clayey soil	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Mar 23, 2021	Indefinite

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	TP01_0.2	Mar 19, 2021		Soil	S21-Ma40647				X	X	X	X
2	TP01_0.5	Mar 19, 2021		Soil	S21-Ma40648	X			X	X	X	
3	TP01_1.0	Mar 19, 2021		Soil	S21-Ma40649			X		X		
4	TP01_2.0	Mar 19, 2021		Soil	S21-Ma40650			X		X		
5	TP02_0.2	Mar 19, 2021		Soil	S21-Ma40651				X	X	X	X
6	TP02_0.5	Mar 19, 2021		Soil	S21-Ma40652				X	X	X	
7	TP02_1.0	Mar 19, 2021		Soil	S21-Ma40653		X					
8	TP02_2.0	Mar 19, 2021		Soil	S21-Ma40654				X	X	X	
9	TP03_0.2	Mar 19, 2021		Soil	S21-Ma40655				X	X	X	
10	TP03_0.5	Mar 19, 2021		Soil	S21-Ma40656				X	X	X	

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Site # 1254 & 14271

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NATA # 1261 Site # 18217

Brisbane
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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
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NATA # 1261
Site # 23736

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Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
11	TP04_0.2	Mar 19, 2021		Soil	S21-Ma40657				X	X	X	
12	TP04_0.5	Mar 19, 2021		Soil	S21-Ma40658	X			X	X	X	
13	TP04_1.0	Mar 19, 2021		Soil	S21-Ma40659			X		X		
14	TP05_0.2	Mar 19, 2021		Soil	S21-Ma40660				X	X	X	
15	TP05_0.5	Mar 19, 2021		Soil	S21-Ma40661				X	X	X	X
16	TP05_1.0	Mar 19, 2021		Soil	S21-Ma40662		X					
17	TP06_0.2	Mar 19, 2021		Soil	S21-Ma40663				X	X	X	
18	TP06_0.5	Mar 19, 2021		Soil	S21-Ma40664				X	X	X	
19	TP06_1.0	Mar 19, 2021		Soil	S21-Ma40665				X	X	X	
20	TP07_0.2	Mar 19, 2021		Soil	S21-Ma40666				X	X	X	
21	TP07_0.5	Mar 19, 2021		Soil	S21-Ma40667				X	X	X	X

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Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
22	TP07_1.0	Mar 19, 2021		Soil	S21-Ma40668			X		X		
23	TP08_0.2	Mar 19, 2021		Soil	S21-Ma40669				X	X	X	
24	TP08_0.5	Mar 19, 2021		Soil	S21-Ma40670	X			X	X	X	
25	TP08_1.0	Mar 19, 2021		Soil	S21-Ma40671				X	X	X	
26	TP09_0.2	Mar 19, 2021		Soil	S21-Ma40672				X	X	X	
27	TP09_0.5	Mar 19, 2021		Soil	S21-Ma40673				X	X	X	
28	TP09_1.0	Mar 19, 2021		Soil	S21-Ma40674			X		X		
29	QC101	Mar 19, 2021		Soil	S21-Ma40675				X	X	X	
Test Counts						4	2	5	22	27	22	4

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

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

Terms

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

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Comments

The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Authorised by:

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

Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:

Report **782134-S**
Project name HMA
Received Date Mar 22, 2021

Client Sample ID			TP01_0.2	TP01_0.5	TP01_1.0	TP01_2.0
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Ma40647**	**S21-Ma40648**	**S21-Ma40649**	**S21-Ma40650**
Date Sampled			**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	102	95	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-

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Client Sample ID			TP01_0.2	TP01_0.5	TP01_1.0	TP01_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40647	S21-Ma40648	S21-Ma40649	S21-Ma40650
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	82	74	-	-
p-Terphenyl-d14 (surr.)	1	%	89	87	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	-
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	123	115	-	-
Tetrachloro-m-xylene (surr.)	1	%	102	101	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	123	115	-	-
Tetrachloro-m-xylene (surr.)	1	%	102	101	-	-

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Client Sample ID			TP01_0.2	TP01_0.5	TP01_1.0	TP01_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40647	S21-Ma40648	S21-Ma40649	S21-Ma40650
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
2-Nitrophenol	1	mg/kg	< 1	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Phenol-d6 (surr.)	1	%	79	74	-	-
Heavy Metals						
Arsenic	2	mg/kg	12	9.2	7.8	5.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	87	77	79	66
Copper	5	mg/kg	28	30	27	19
Lead	5	mg/kg	21	18	14	8.6
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	30	30	34	25
Zinc	5	mg/kg	55	51	50	51
% Moisture	1	%	23	23	13	12
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	-	-	-
13C2-6:2 FTSA (surr.)	1	%	83	-	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	-	-
18O2-PFHxS (surr.)	1	%	78	-	-	-
13C8-PFOS (surr.)	1	%	89	-	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	-	-
13C8-PFOA (surr.)	1	%	84	-	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	-	-

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Client Sample ID			TP02_0.2	TP02_0.5	TP02_2.0	TP03_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40651	S21-Ma40652	S21-Ma40654	S21-Ma40655
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	93	91	93	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	73	78	84	89
p-Terphenyl-d14 (surr.)	1	%	88	83	91	90

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Client Sample ID			TP02_0.2	TP02_0.5	TP02_2.0	TP03_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40651	S21-Ma40652	S21-Ma40654	S21-Ma40655
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	110	104	101	101
Tetrachloro-m-xylene (surr.)	1	%	99	96	103	99
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	110	104	101	101
Tetrachloro-m-xylene (surr.)	1	%	99	96	103	99
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

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Client Sample ID			TP02_0.2	TP02_0.5	TP02_2.0	TP03_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40651	S21-Ma40652	S21-Ma40654	S21-Ma40655
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	64	68	75	85
Heavy Metals						
Arsenic	2	mg/kg	3.9	2.7	2.7	5.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	55	85	91	59
Copper	5	mg/kg	13	19	18	12
Lead	5	mg/kg	20	11	14	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	20	20	12
Zinc	5	mg/kg	31	65	68	31
% Moisture	1	%	12	11	13	9.1
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10	-	-	-
13C2-6:2 FTSA (surr.)	1	%	89	-	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	-	-
18O2-PFHxS (surr.)	1	%	82	-	-	-
13C8-PFOS (surr.)	1	%	102	-	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	-	-
13C8-PFOA (surr.)	1	%	88	-	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	-	-

Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-

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Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	108	90	97	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	80	80	79	-
p-Terphenyl-d14 (surr.)	1	%	89	91	89	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-

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Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	103	109	98	-
Tetrachloro-m-xylene (surr.)	1	%	108	109	103	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	103	109	98	-
Tetrachloro-m-xylene (surr.)	1	%	108	109	103	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
Dinoseb	20	mg/kg	< 20	< 20	< 20	-

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Client Sample ID			TP03_0.5	TP04_0.2	TP04_0.5	TP04_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40656	S21-Ma40657	S21-Ma40658	S21-Ma40659
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	-
Phenol-d6 (surr.)	1	%	72	71	74	-
Heavy Metals						
Arsenic	2	mg/kg	3.1	8.9	11	7.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	100	73	99	98
Copper	5	mg/kg	24	27	38	36
Lead	5	mg/kg	12	17	19	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	30	26	42	38
Zinc	5	mg/kg	77	50	65	60
% Moisture	1	%	13	21	22	19

Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	103	109	96	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

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Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	77	77	91	88
p-Terphenyl-d14 (surr.)	1	%	84	83	97	95
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	93	92	111	105
Tetrachloro-m-xylene (surr.)	1	%	98	98	121	114

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Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	93	92	111	105
Tetrachloro-m-xylene (surr.)	1	%	98	98	121	114
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	75	74	79	83
Heavy Metals						
Arsenic	2	mg/kg	12	10	11	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	100	110	120
Copper	5	mg/kg	34	37	42	43
Lead	5	mg/kg	21	21	23	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	32	38	43	44
Zinc	5	mg/kg	54	60	74	77
% Moisture	1	%	18	22	21	21

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Client Sample ID			TP05_0.2	TP05_0.5	TP06_0.2	TP06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40660	S21-Ma40661	S21-Ma40663	S21-Ma40664
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	-	< 10	-	-
13C2-6:2 FTSA (surr.)	1	%	-	88	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	-	-
18O2-PFHxS (surr.)	1	%	-	88	-	-
13C8-PFOS (surr.)	1	%	-	103	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	-	-
13C8-PFOA (surr.)	1	%	-	89	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	-	-

Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	97	101	100	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

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Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	95	108	103	-
p-Terphenyl-d14 (surr.)	1	%	111	118	104	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	91	100	99	-
Tetrachloro-m-xylene (surr.)	1	%	111	116	103	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

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Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	91	100	99	-
Tetrachloro-m-xylene (surr.)	1	%	111	116	103	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
Dinoseb	20	mg/kg	< 20	< 20	< 20	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	-
Phenol-d6 (surr.)	1	%	74	78	76	-
Heavy Metals						
Arsenic	2	mg/kg	8.2	9.3	10	7.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	100	100	93	100
Copper	5	mg/kg	33	38	37	29
Lead	5	mg/kg	23	21	21	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Nickel	5	mg/kg	35	39	33	30
Zinc	5	mg/kg	62	68	54	43
% Moisture	1	%	21	21	20	19
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	-	-	< 10	-
13C2-6:2 FTSA (surr.)	1	%	-	-	93	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	-	< 5	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	-	< 5	-
18O2-PFHxS (surr.)	1	%	-	-	91	-
13C8-PFOS (surr.)	1	%	-	-	105	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	-	< 5	-

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Client Sample ID			TP06_1.0	TP07_0.2	TP07_0.5	TP07_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40665	S21-Ma40666	S21-Ma40667	S21-Ma40668
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
13C8-PFOA (surr.)	1	%	-	-	87	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	< 5	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	< 5	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	< 5	-

Client Sample ID			TP08_0.2	TP08_0.5	TP08_1.0	TP09_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40669	S21-Ma40670	S21-Ma40671	S21-Ma40672
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	79	93	94	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

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Client Sample ID			TP08_0.2	TP08_0.5	TP08_1.0	TP09_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40669	S21-Ma40670	S21-Ma40671	S21-Ma40672
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	102	102	90	92
p-Terphenyl-d14 (surr.)	1	%	104	102	96	99
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	92	91	55	57
Tetrachloro-m-xylene (surr.)	1	%	107	105	89	93
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	92	91	55	57
Tetrachloro-m-xylene (surr.)	1	%	107	105	89	93

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Client Sample ID			TP08_0.2	TP08_0.5	TP08_1.0	TP09_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40669	S21-Ma40670	S21-Ma40671	S21-Ma40672
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	71	78	75	76
Heavy Metals						
Arsenic	2	mg/kg	14	4.0	4.5	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	44	79	62	53
Copper	5	mg/kg	23	25	27	23
Lead	5	mg/kg	18	18	13	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	19	22	16
Zinc	5	mg/kg	34	64	63	52
% Moisture	1	%	12	17	9.5	11

Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	-	< 50

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Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
BTEX					
Benzene	0.1	mg/kg	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	88	-	63
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	< 100
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	86	-	94
p-Terphenyl-d14 (surr.)	1	%	97	-	99
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05

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Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	-	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	60	-	58
Tetrachloro-m-xylene (surr.)	1	%	90	-	91
Polychlorinated Biphenyls					
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	60	-	58
Tetrachloro-m-xylene (surr.)	1	%	90	-	91
Phenols (Halogenated)					
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1
Pentachlorophenol	1	mg/kg	< 1	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	-	< 5
Dinoseb	20	mg/kg	< 20	-	< 20

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Client Sample ID			TP09_0.5	TP09_1.0	QC101
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S21-Ma40673	S21-Ma40674	S21-Ma40675
Date Sampled			Mar 19, 2021	Mar 19, 2021	Mar 19, 2021
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
Phenol	0.5	mg/kg	< 0.5	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20
Phenol-d6 (surr.)	1	%	84	-	86
Heavy Metals					
Arsenic	2	mg/kg	5.2	5.2	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	89	79	120
Copper	5	mg/kg	44	29	24
Lead	5	mg/kg	33	28	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	23	23	24
Zinc	5	mg/kg	71	82	81
% Moisture	1	%	15	13	14

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Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Mar 23, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Mar 23, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Mar 23, 2021	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Mar 23, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs) - Short	Brisbane	Mar 24, 2021	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: HMA

Order No.:
Report #: 782134
Phone:
Fax:

Received: Mar 23, 2021 10:33 AM
Due: Mar 25, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	TP01_0.2	Mar 19, 2021		Soil	S21-Ma40647				X	X	X	X
2	TP01_0.5	Mar 19, 2021		Soil	S21-Ma40648	X			X	X	X	
3	TP01_1.0	Mar 19, 2021		Soil	S21-Ma40649			X		X		
4	TP01_2.0	Mar 19, 2021		Soil	S21-Ma40650			X		X		
5	TP02_0.2	Mar 19, 2021		Soil	S21-Ma40651				X	X	X	X
6	TP02_0.5	Mar 19, 2021		Soil	S21-Ma40652				X	X	X	
7	TP02_1.0	Mar 19, 2021		Soil	S21-Ma40653		X					
8	TP02_2.0	Mar 19, 2021		Soil	S21-Ma40654				X	X	X	
9	TP03_0.2	Mar 19, 2021		Soil	S21-Ma40655				X	X	X	
10	TP03_0.5	Mar 19, 2021		Soil	S21-Ma40656				X	X	X	

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Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
11	TP04_0.2	Mar 19, 2021		Soil	S21-Ma40657				X	X	X	
12	TP04_0.5	Mar 19, 2021		Soil	S21-Ma40658	X			X	X	X	
13	TP04_1.0	Mar 19, 2021		Soil	S21-Ma40659			X		X		
14	TP05_0.2	Mar 19, 2021		Soil	S21-Ma40660				X	X	X	
15	TP05_0.5	Mar 19, 2021		Soil	S21-Ma40661				X	X	X	X
16	TP05_1.0	Mar 19, 2021		Soil	S21-Ma40662		X					
17	TP06_0.2	Mar 19, 2021		Soil	S21-Ma40663				X	X	X	
18	TP06_0.5	Mar 19, 2021		Soil	S21-Ma40664				X	X	X	
19	TP06_1.0	Mar 19, 2021		Soil	S21-Ma40665				X	X	X	
20	TP07_0.2	Mar 19, 2021		Soil	S21-Ma40666				X	X	X	
21	TP07_0.5	Mar 19, 2021		Soil	S21-Ma40667				X	X	X	X

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Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Suite B13: OCP/PCB	Moisture Set	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794												X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
22	TP07_1.0	Mar 19, 2021		Soil	S21-Ma40668			X		X		
23	TP08_0.2	Mar 19, 2021		Soil	S21-Ma40669				X	X	X	
24	TP08_0.5	Mar 19, 2021		Soil	S21-Ma40670	X			X	X	X	
25	TP08_1.0	Mar 19, 2021		Soil	S21-Ma40671				X	X	X	
26	TP09_0.2	Mar 19, 2021		Soil	S21-Ma40672				X	X	X	
27	TP09_0.5	Mar 19, 2021		Soil	S21-Ma40673				X	X	X	
28	TP09_1.0	Mar 19, 2021		Soil	S21-Ma40674			X		X		
29	QC101	Mar 19, 2021		Soil	S21-Ma40675				X	X	X	
Test Counts						4	2	5	22	27	22	4

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

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

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

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	90			70-130	Pass	
TRH C10-C14	%	85			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	98			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	100			70-130	Pass	
m&p-Xylenes	%	99			70-130	Pass	
o-Xylene	%	100			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	78			70-130	Pass	
TRH C6-C10	%	91			70-130	Pass	
TRH >C10-C16	%	84			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	97			70-130	Pass	
Benz(a)anthracene	%	90			70-130	Pass	
Benzo(a)pyrene	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	%	87			70-130	Pass	
Benzo(g.h.i)perylene	%	84			70-130	Pass	
Benzo(k)fluoranthene	%	90			70-130	Pass	
Chrysene	%	93			70-130	Pass	
Dibenz(a.h)anthracene	%	94			70-130	Pass	
Fluoranthene	%	89			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	91			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Phenanthrene	%	102			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	112			70-130	Pass	
4.4'-DDD	%	130			70-130	Pass	
4.4'-DDE	%	86			70-130	Pass	
4.4'-DDT	%	73			70-130	Pass	
a-BHC	%	78			70-130	Pass	
Aldrin	%	93			70-130	Pass	
b-BHC	%	83			70-130	Pass	
d-BHC	%	70			70-130	Pass	
Dieldrin	%	120			70-130	Pass	
Endosulfan I	%	117			70-130	Pass	
Endosulfan II	%	123			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	81			70-130	Pass	

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Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	%	130			70-130	Pass	
Endrin ketone	%	80			70-130	Pass	
g-BHC (Lindane)	%	70			70-130	Pass	
Heptachlor	%	83			70-130	Pass	
Heptachlor epoxide	%	123			70-130	Pass	
Hexachlorobenzene	%	75			70-130	Pass	
Methoxychlor	%	73			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	81			70-130	Pass	
Aroclor-1260	%	85			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	101			30-130	Pass	
2.4-Dichlorophenol	%	112			30-130	Pass	
2.4.5-Trichlorophenol	%	124			30-130	Pass	
2.4.6-Trichlorophenol	%	122			30-130	Pass	
2.6-Dichlorophenol	%	118			30-130	Pass	
4-Chloro-3-methylphenol	%	112			30-130	Pass	
Pentachlorophenol	%	76			30-130	Pass	
Tetrachlorophenols - Total	%	112			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Methyl-4.6-dinitrophenol	%	76			30-130	Pass	
2-Methylphenol (o-Cresol)	%	89			30-130	Pass	
2-Nitrophenol	%	84			30-130	Pass	
2.4-Dimethylphenol	%	96			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	107			30-130	Pass	
4-Nitrophenol	%	118			30-130	Pass	
Dinoseb	%	98			30-130	Pass	
Phenol	%	95			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	92			80-120	Pass	
Cadmium	%	95			80-120	Pass	
Chromium	%	98			80-120	Pass	
Copper	%	99			80-120	Pass	
Lead	%	96			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	92			80-120	Pass	
LCS - % Recovery							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	72			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	92			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	99			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	86			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Benzo(g.h.i)perylene	S21-Ma32859	NCP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	S21-Ma32859	NCP	%	80			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ma32859	NCP	%	80			70-130	Pass	
Spike - % Recovery									

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Organochlorine Pesticides				Result 1					
4.4'-DDT	S21-Ma32822	NCP	%	86			70-130	Pass	
Endrin aldehyde	S21-Ma32822	NCP	%	90			70-130	Pass	
Methoxychlor	S21-Ma32822	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S21-Ma33182	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2.4-Dichlorophenol	S21-Ma32859	NCP	%	83			30-130	Pass	
2.4.6-Trichlorophenol	S21-Ma32859	NCP	%	79			30-130	Pass	
2.6-Dichlorophenol	S21-Ma32859	NCP	%	76			30-130	Pass	
4-Chloro-3-methylphenol	S21-Ma32859	NCP	%	96			30-130	Pass	
Pentachlorophenol	S21-Ma32859	NCP	%	94			30-130	Pass	
Tetrachlorophenols - Total	S21-Ma32859	NCP	%	92			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S21-Ma32859	NCP	%	91			30-130	Pass	
2-Methyl-4.6-dinitrophenol	S21-Ma32859	NCP	%	91			30-130	Pass	
2-Methylphenol (o-Cresol)	S21-Ma32859	NCP	%	70			30-130	Pass	
2-Nitrophenol	S21-Ma32859	NCP	%	86			30-130	Pass	
2.4-Dinitrophenol	S21-Ma32859	NCP	%	89			70-130	Pass	
4-Nitrophenol	S21-Ma32859	NCP	%	95			30-130	Pass	
Dinoseb	S21-Ma32859	NCP	%	98			30-130	Pass	
Spike - % Recovery									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1					
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Ma37897	NCP	%	77			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Ma37897	NCP	%	88			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Ma37897	NCP	%	88			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Ma37897	NCP	%	76			50-150	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S21-Ma40656	CP	%	70			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Ma40656	CP	%	78			70-130	Pass	
Toluene	S21-Ma40656	CP	%	82			70-130	Pass	
Ethylbenzene	S21-Ma40656	CP	%	79			70-130	Pass	
m&p-Xylenes	S21-Ma40656	CP	%	77			70-130	Pass	
o-Xylene	S21-Ma40656	CP	%	79			70-130	Pass	
Xylenes - Total*	S21-Ma40656	CP	%	78			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S21-Ma40656	CP	%	123			70-130	Pass	
TRH C6-C10	S21-Ma40656	CP	%	70			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S21-Ma40658	CP	%	77			70-130	Pass	
Acenaphthylene	S21-Ma40658	CP	%	76			70-130	Pass	
Anthracene	S21-Ma40658	CP	%	83			70-130	Pass	
Benz(a)anthracene	S21-Ma40658	CP	%	71			70-130	Pass	
Benzo(a)pyrene	S21-Ma40658	CP	%	78			70-130	Pass	

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	S21-Ma40658	CP	%	78			70-130	Pass	
Benzo(k)fluoranthene	S21-Ma40658	CP	%	87			70-130	Pass	
Chrysene	S21-Ma40658	CP	%	74			70-130	Pass	
Fluoranthene	S21-Ma40658	CP	%	78			70-130	Pass	
Fluorene	S21-Ma40658	CP	%	81			70-130	Pass	
Naphthalene	S21-Ma40658	CP	%	76			70-130	Pass	
Phenanthrene	S21-Ma40658	CP	%	75			70-130	Pass	
Pyrene	S21-Ma40658	CP	%	79			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S21-Ma40658	CP	%	88			70-130	Pass	
4.4'-DDD	S21-Ma40658	CP	%	82			70-130	Pass	
4.4'-DDE	S21-Ma40658	CP	%	90			70-130	Pass	
a-BHC	S21-Ma40658	CP	%	79			70-130	Pass	
Aldrin	S21-Ma40658	CP	%	89			70-130	Pass	
b-BHC	S21-Ma40658	CP	%	79			70-130	Pass	
d-BHC	S21-Ma40658	CP	%	79			70-130	Pass	
Dieldrin	S21-Ma40658	CP	%	93			70-130	Pass	
Endosulfan I	S21-Ma40658	CP	%	85			70-130	Pass	
Endosulfan II	S21-Ma40658	CP	%	80			70-130	Pass	
Endosulfan sulphate	S21-Ma40658	CP	%	79			70-130	Pass	
Endrin	S21-Ma40658	CP	%	74			70-130	Pass	
Endrin ketone	S21-Ma40658	CP	%	80			70-130	Pass	
g-BHC (Lindane)	S21-Ma40658	CP	%	88			70-130	Pass	
Heptachlor	S21-Ma40658	CP	%	78			70-130	Pass	
Heptachlor epoxide	S21-Ma40658	CP	%	85			70-130	Pass	
Hexachlorobenzene	S21-Ma40658	CP	%	86			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S21-Ma40658	CP	%	92			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S21-Ma40658	CP	%	74			30-130	Pass	
2.4.5-Trichlorophenol	S21-Ma40658	CP	%	71			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2.4-Dimethylphenol	S21-Ma40658	CP	%	72			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Ma40658	CP	%	83			30-130	Pass	
Phenol	S21-Ma40658	CP	%	74			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Ma40661	CP	%	104			75-125	Pass	
Cadmium	S21-Ma40661	CP	%	110			75-125	Pass	
Chromium	S21-Ma40661	CP	%	112			75-125	Pass	
Copper	S21-Ma40661	CP	%	102			75-125	Pass	
Lead	S21-Ma40661	CP	%	103			75-125	Pass	
Mercury	S21-Ma40661	CP	%	111			75-125	Pass	
Nickel	S21-Ma40661	CP	%	107			75-125	Pass	
Zinc	S21-Ma40661	CP	%	109			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S21-Ma40669	CP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

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Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C10-C16	S21-Ma40669	CP	%	87			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Ma40672	CP	%	107			75-125	Pass	
Cadmium	S21-Ma40672	CP	%	110			75-125	Pass	
Chromium	S21-Ma40672	CP	%	96			75-125	Pass	
Copper	S21-Ma40672	CP	%	104			75-125	Pass	
Lead	S21-Ma40672	CP	%	107			75-125	Pass	
Mercury	S21-Ma40672	CP	%	114			75-125	Pass	
Nickel	S21-Ma40672	CP	%	100			75-125	Pass	
Zinc	S21-Ma40672	CP	%	97			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	S21-Ma32682	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S21-Ma40267	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S21-Ma40267	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Ma37886	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Ma37886	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Ma37886	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Ma37886	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma40649	CP	mg/kg	7.8	6.4	19	30%	Pass	
Cadmium	S21-Ma40649	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma40649	CP	mg/kg	79	72	9.0	30%	Pass	
Copper	S21-Ma40649	CP	mg/kg	27	31	13	30%	Pass	
Lead	S21-Ma40649	CP	mg/kg	14	12	16	30%	Pass	
Mercury	S21-Ma40649	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma40649	CP	mg/kg	34	37	10	30%	Pass	
Zinc	S21-Ma40649	CP	mg/kg	50	56	11	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Ma40655	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Ma40655	CP	mg/kg	< 50	< 50	<1	30%	Pass	

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Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Ma40655	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Ma40655	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S21-Ma40655	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Ma40655	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Ma40655	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S21-Ma40655	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S21-Ma40655	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S21-Ma40655	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

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Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Ma40655	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Ma40655	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Ma40655	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S21-Ma40655	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S21-Ma40655	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Ma40655	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Ma40655	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Ma40655	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Ma40655	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Ma40657	CP	%	21	19	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma40660	CP	mg/kg	12	9.2	29	30%	Pass	
Cadmium	S21-Ma40660	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma40660	CP	mg/kg	130	89	35	30%	Fail	Q15
Copper	S21-Ma40660	CP	mg/kg	34	34	1.0	30%	Pass	
Lead	S21-Ma40660	CP	mg/kg	21	18	13	30%	Pass	
Mercury	S21-Ma40660	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma40660	CP	mg/kg	32	35	12	30%	Pass	
Zinc	S21-Ma40660	CP	mg/kg	54	59	9.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Ma40668	CP	%	19	20	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Ma40671	CP	mg/kg	4.5	4.9	7.0	30%	Pass	
Cadmium	S21-Ma40671	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Ma40671	CP	mg/kg	62	76	20	30%	Pass	
Copper	S21-Ma40671	CP	mg/kg	27	33	18	30%	Pass	
Lead	S21-Ma40671	CP	mg/kg	13	15	8.0	30%	Pass	
Mercury	S21-Ma40671	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Ma40671	CP	mg/kg	22	34	44	30%	Fail	Q15
Zinc	S21-Ma40671	CP	mg/kg	63	76	18	30%	Pass	

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Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the concentration of the associated native PFAS compounds.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Analytical Services Manager
Senior Analyst-Organic (NSW)
Senior Analyst-Metal (NSW)
Senior Analyst-PFAS (QLD)

General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

CHAIN OF CUSTODY RECORD

Sydney Laboratory — Unit 17 Dacre St, Mitchell ACT 2911 — 02 6260 5466 — EnviroSampleACT@eurofins.com
Brisbane Laboratory — Unit 1 11 Smallwood Pl, Murarrie QLD 4172 — 07 3902 4600 — EnviroSampleQLD@eurofins.com
Perth Laboratory — Unit 2, 91 Leach Highway, Kewdale WA 6105 — 08 9251 9600 — EnviroSamplePER@eurofins.com
Melbourne Laboratory — 2 Kingston Town Close, Oakleigh VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	Agon	Project No	-	Project Manager	JO
Address	4/10 Kennedy St Kingston	Project Name	HMA	EDD Format (ESdat, EQuIS, Casaro)	ESDAT
Contact Name				Sampler(s)	OF/DO
Phone No				Handed over by	J.O
Special Directions	Reagent Water ASLP Passed through 0.1 micro filter prior to analysis			Email for Invoice	agonenviro.com.au; finance@agonenviro.com.au;
Purchase Order				Email for Results	agonenviro.com.au
Quote ID No	Quote Nos # 190125AEGA			Containers	Turnaround Time (TAT) Requirements

Analytes (Please tick the boxes to indicate the analytes required; if in doubt, please contact the laboratory)

No	Client Sample ID	Sampled Date/Time (dd/mm/yyyy hh:mm)	Matrix (Soil= S) Water (W)	8 Metals	8B Soils (8 Metals, No Fluoride or Cyanide) - See Special Instructions	Asbestos ID	PFAS Standard LOR	ASLP Hexavalent Chromium	Containers	Turnaround Time (TAT) Requirements
1	TP01_0.2	19.3.21	S					X		☐ Overnight (Sam)* ☑ 1 Day* ☐ 2 Day* ☐ 3 Day* ☐ 5 Day *Surcharges apply ☐ Other ( )
2	TP01_0.5	19.3.21	S							
3	TP01_1.0	19.3.21	S							
4	TP01_2.0	19.3.21	S							
5	TP02_0.2	19.3.21	S					X		
6	TP02_0.5	19.3.21	S							
7	TP02_1.0	19.3.21	S							
8	TP02_2.0	19.3.21	S							
9	TP03_0.2	19.3.21	S							
10	TP03_0.5	19.3.21	S					X		
11	TP04_0.2	19.3.21	S							
12	TP04_0.5	19.3.21	S							
13	TP04_1.0	19.3.21	S							
14	TP05_0.2	19.3.21	S					X		
15	TP05_0.5	19.3.21	S							
16	TP05_1.0	19.3.21	S							
17	TP06_0.2	19.3.21	S							
18	TP06_0.5	19.3.21	S							
19	TP06_1.0	19.3.21	S							
20	TP07_0.2	19.3.21	S					X		
21	TP07_0.5	19.3.21	S							
22	TP07_1.0	19.3.21	S							
23	TP08_0.2	19.3.21	S							
24	TP08_0.5	19.3.21	S							
25	TP08_1.0	19.3.21	S							
26	TP09_0.2	19.3.21	S					X		
27	TP09_0.5	19.3.21	S							
28	TP09_1.0	19.3.21	S							
29	QC101	19.3.21	S							
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
	Total Counts							5		

Method of Shipment: ☐ Courier (#) ☐ Postal Name

Eurofins | mgt Laboratory Use Only — Received By: — STD | ONE | MEL | PER | ADL | NTL | DRW

Received By: — STD | ONE | MEL | PER | ADL | NTL | DRW

Date: 19/3/2021 Time: 12:30 Temperature: 21.2°C

Date: / / Time: Report No: 683955

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

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Certificate of Analysis

Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:

Report **783755-L**
Project name ADDITIONAL: HMA
Received Date Mar 29, 2021

Client Sample ID			**TP01_0.2**	**TP02_0.2**	**TP03_0.5**	**TP05_0.2**
Sample Matrix			**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**
Eurofins Sample No.			**S21-Ma53470**	**S21-Ma53471**	**S21-Ma53472**	**S21-Ma53473**
Date Sampled			**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**	**Mar 19, 2021**
Test/Reference	LOR	Unit				
Chromium (hexavalent)	0.005	mg/L	0.006	0.006	0.005	0.005
AUS Leaching Procedure						
Leachate Fluid[C01]		comment	4.0	4.0	4.0	4.0
pH (initial)	0.1	pH Units	6.6	6.6	6.8	6.6
pH (Leachate fluid)	0.1	pH Units	6.3	6.3	6.3	6.3
pH (off)	0.1	pH Units	6.5	6.9	6.9	6.2

Client Sample ID			**TP07_0.2**	**TP09_0.2**
Sample Matrix			**AUS Leachate - Reagent Water**	**AUS Leachate - Reagent Water**
Eurofins Sample No.			**S21-Ma53474**	**S21-Ma53475**
Date Sampled			**Mar 19, 2021**	**Mar 19, 2021**
Test/Reference	LOR	Unit		
Chromium (hexavalent)	0.005	mg/L	< 0.005	0.011
AUS Leaching Procedure				
Leachate Fluid[C01]		comment	4.0	4.0
pH (initial)	0.1	pH Units	6.6	6.8
pH (Leachate fluid)	0.1	pH Units	6.3	6.3
pH (off)	0.1	pH Units	6.5	6.9

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Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Chromium (hexavalent)	Sydney	Mar 30, 2021	28 Days
- Method: In-house method E057.2			
AUS Leaching Procedure	Sydney	Mar 30, 2021	7 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

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Site # 1254 & 14271

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NATA # 1261 Site # 20794

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

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: ADDITIONAL: HMA

Order No.:
Report #: 783755
Phone:
Fax:

Received: Mar 29, 2021 1:31 PM
Due: Mar 31, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Chromium (hexavalent)	AUS Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	TP01_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53470	X	X
2	TP02_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53471	X	X
3	TP03_0.5	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53472	X	X
4	TP05_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53473	X	X

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NATA # 1261 Site # 20794

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Phone : 0800 856 450
IANZ # 1290

Company Name: Agon Environmental Pty Ltd - SA
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: ADDITIONAL: HMA

Order No.:
Report #: 783755
Phone:
Fax:

Received: Mar 29, 2021 1:31 PM
Due: Mar 31, 2021
Priority: 2 Day
Contact Name:

Eurofins Analytical Services Manager :

Sample Detail						Chromium (hexavalent)	AUS Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory							
External Laboratory							
5	TP07_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53474	X	X
6	TP09_0.2	Mar 19, 2021		AUS Leachate - Reagent Water	S21-Ma53475	X	X
Test Counts						6	6

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Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

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

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

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

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

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Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	S21-Ma53471	CP	%	79			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	S21-Ma53470	CP	mg/L	0.006	0.006	11	30%	Pass	

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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
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

Authorised by:

Analytical Services Manager
Senior Analyst-Inorganic (NSW)

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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Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab
Project Name:	Jerrabomberra	**Order Number**	
Project Manager:		**Sampler:**	**Attn:**
Emails:	@douglaspartners.com.a		**Phone:** 612 9910 6200
Date Required:	Standard ☐		**Email:** @envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

Sample ID	Lab ID	Date Sampled	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Clay			Notes/preservation
Bore 1/0.1	1	11/08/20	S	G	x									
Bore 1/0.5	2	18/08/20	S	G		x								
Bore 1/1.0	3	18/08/20	S	G		x								
Bore 2/0.1	4	04/08/20	S	G	x									
Bore 2/0.5	5	04/08/20	S	G	x									
Bore 2/1.0	6	04/08/20	S	G		x					x			
Bore 2/2.0	7	04/08/20	S	G		x								
Bore 2/3.0	8	04/08/20	S	G		x								
Bore 2/4.0	9	04/08/20	S	G		x								
Bore 2/5.0	10	04/08/20	S	G		x								
Bore3/0.1	11	06/08/20	S	G	x									
Bore 3/0.5	12	06/08/20	S	G		x								
Bore 3/1.0	13	06/08/20	S	G		x								
Bore 4/0.1	14	06/08/20	S	G	x									
Bore 4/0.5	15	06/08/20	S	G										
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address:** @douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 249251

Date Received: 14/08/2020
Time Received: 5:09pm
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

received 18/08/2020

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 4/1.0	16	04/08/20	S	G		x								
Bore 4/2.0	17	04/08/20	S	G		x								
Bore 4/3.0	18	04/08/20	S	G	x	x	add	20.1.21						
Bore 4/4.0	NR	04/08/20	S	G	x									
Bore 5/0.1	19	06/08/20	S	G	x									
Bore 5/0.5	20	06/08/20	S	G		x								
Bore 5/1.0	21	06/08/20	S	G		x								
Bore 6/0.1	22	04/08/20	S	G	x									
Bore 6/0.5	23	04/08/20	S	G		x								
Bore 6/1.0	24	04/08/20	S	G	x	x								
Bore 6/2.0	25	04/08/20	S	G		x								
Bore 6/3.0	26	04/08/20	S	G		x								
Bore 6/4.0	27	04/08/20	S	G		x								
Bore 6/5.0	28	04/08/20	S	G		x								
Bore 6/6.0	29	04/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** SDG | **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd | **Address:** [redacted]@douglaspartners.com.au | **Phone:** | **Fax:**

Signed: | **Received by:** | **Date & Time:**

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]		**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 7/0.1	30	11/08/20	S	G	x	x								
Bore 7/0.5	31	11/08/20	S	G		x								
Bore 7/1.0	32	11/08/20	S	G		x								
Bore 8/0.1	33	04/08/20	S	G	x									
Bore 8/0.5	34	04/08/20	S	G		x								
Bore 8/1.0	35	04/08/20	S	G		x								
Bore 8/2.0	36	04/08/20	S	G		x								
Bore 8/3.0	37	04/08/20	S	G		x								
Bore 8/4.0	38	04/08/20	S	G		x								
Bore 8/5.0	39	04/08/20	S	G		x								
Bore 9/0.1	40	06/08/20	S	G	x									
Bore 9/0.5	41	06/08/20	S	G	x									
Bore 9/1.0	42	06/08/20	S	G		x								
Bore 10/0.1	43	04/08/20	S	G	x									
Bore 10/0.5	44	04/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

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Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab
Project Name:	Jerrabomberra	**Order Number**	
Project Manager:	[redacted]	**Sampler:** [redacted]	**Attn:** [redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]	**Phone:** 612 9910 6200
Date Required:	Standard ☐		**Email:** [redacted]envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

Sample ID	Lab ID	Sampling Date	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 10/1.0	45	04/08/20	S	G	x						x			
Bore 10/2.0	46	04/08/20	S	G		x								
Bore 10/3.0	47	04/08/20	S	G		x								
Bore 10/4.0	48	04/08/20	S	G		x								
Bore 11/0.1	49	07/08/20	S	G	x									
Bore 11/0.5	50	07/08/20	S	G		x								
Bore 11/1.0	51	07/08/20	S	G		x								
Bore 12/0.1	52	11/08/20	S	G	x									
Bore 12/0.5	53	11/08/20	S	G		x								
Bore 12/1.0	54	11/08/20	S	G		x								
Bore 13/0.1	55	05/08/20	S	G	x									
Bore 13/0.5	5C	05/08/20	S	G		x								
Bore 13/1.0	57	05/08/20	S	G		x								
Bore 13/2.0	58	05/08/20	S	G		x								
Bore 13/3.0	59	05/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

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Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

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Signed: **Received by:** [redacted] **Date & Time:**

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Project Name:	Jerrabomberra	**Order Number**			
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Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 13/4.0	60	05/08/20	S	G	x									
Bore 13/5.0	61	05/08/20	S	G		x								
Bore 14/0.1	62	05/08/20	S	G	x									
Bore 14/0.5	63	05/08/20	S	G		x								
Bore 14/1.0	64	05/08/20	S	G		x								
Bore 14/2.0	65	05/08/20	S	G		x								
Bore 14/3.0	66	05/08/20	S	G										
Bore 14/4.0	67	05/08/20	S	G										
Bore 14/5.0	68	05/08/20	S	G										
Bore 14/6.0	69	05/08/20	S	G										
Bore 15/0.1	70	05/08/20	S	G	x									
Bore 15/0.5	71	05/08/20	S	G	x									
Bore 15/1.0	72	05/08/20	S	G		x								
Bore 15/2.0	73	05/08/20	S	G		x								
Bore 15/3.0	74	05/08/20	S	G		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** SDG | **Transported to laboratory by:** TNT

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Signed: | **Received by:** | **Date & Time:**

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]		**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: COMB. 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 15/4.0	75	05/08/20	S	G		x								
Bore 16/0.1	76	05/08/20	S	G	x									
Bore 16/0.5	77	05/08/20	S	G		x								
Bore 16/1.0	78	05/08/20	S	G		x								
Bore 16/2.0	79	05/08/20	S	G		x								
Bore 16/3.0	80	05/08/20	S	G		x								
Bore 16/4.0	81	05/08/20	S	G		x								
Bore 16/5.0	82	05/08/20	S	G		x								
Bore 17/0.1	83	10/08/20	S	G	x									
Bore 17/0.5	84	10/08/20	S	G		x								
Bore 17/1.0	85	10/08/20	S	G	x									
Bore 18/0.1	86	10/08/20	S	G	x									
Bore 18/0.5	87	10/08/20	S	G		x								
Bore 18/1.0	88	10/08/20	S	G		x								
TB1	89	04/08/20	S	G			x							
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, C			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
M1	—	05/08/20	M	P				x						To be sent on Monday
M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
RR5	—	11/08/20	S	G	x									Please send to third party lab
RR6	—	11/08/20	S	G	x									Please send to third party lab
RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
Bore 19/0.1	100	05/08/20	S	G	x									
Bore 19/0.5	101	05/08/20	S	G							x			
Bore 19/1.0	102	05/08/20	S	G		x								
Bore 19/2.0	103	05/08/20	S	G	x									
Bore 19/3.0	104	05/08/20	S	G		x								
Bore 19/4.0	105	05/08/20	S	G		x								
Bore 19/5.0	106	05/08/20	S	G										
R1	107					x								
R2	108					x								
R3	109					x								
R4	110					x								
TS1 1/8	111						x	asbestos 2918						
TB4 6/8	112						x							
TB4 6/8	113						x							
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

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PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:		**Relinquished by:**	SDG	**Transported to laboratory by:**	TNT
Send Results to:	Douglas Partners Pty Ltd	**Address:**	[redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:		**Received by:**		**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Date Sampled	Sample Type: S - soil, W - water	Container Type: G - glass, P - plastic	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 1/0.1	1	11/08/20	S	P	x									
Bore 1/0.5	2	18/08/20	S	P		x								
Bore 1/1.0	3	18/08/20	S	P		x								
Bore 2/0.1	4	04/08/20	S	P		x								
Bore 2/0.5	5	04/08/20	S	P		x								
Bore 2/1.0	6	04/08/20	S	P		x								
Bore 2/2.0	7	04/08/20	S	P		x								
Bore 2/3.0	8	04/08/20	S	P		x								
Bore 2/4.0	9	04/08/20	S	P		x								
Bore 2/5.0	10	04/08/20	S	P		x								
Bore3/0.1	11	06/08/20	S	P		x								
Bore 3/0.5	12	06/08/20	S	P		x								
Bore 3/1.0	13	06/08/20	S	P	x									
Bore 4/0.1	14	06/08/20	S	P		x								
Bore 4/0.5	15	06/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager		**Sampler:**		**Attn:**	
Emails:	@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold							Notes/preservation
Bore 4/1.0	16	04/08/20	S	P		x							
Bore 4/2.0	17	04/08/20	S	P		x							
Bore 4/3.0	18	04/08/20	S	P		x							
Bore 4/4.0	NR	04/08/20	S	P		x							
Bore 5/0.1	19	06/08/20	S	P		x							
Bore 5/0.5	20	06/08/20	S	P		x							
Bore 5/1.0	21	06/08/20	S	P		x							
Bore 6/0.1	22	04/08/20	S	P		x							
Bore 6/0.5	23	04/08/20	S	P		x							
Bore 6/1.0	24	04/08/20	S	P		x							
Bore 6/2.0	25	04/08/20	S	P	x								
Bore 6/3.0	26	04/08/20	S	P		x							
Bore 6/4.0	27	04/08/20	S	P		x							
Bore 6/5.0	28	04/08/20	S	P		x							
Bore 6/6.0	29	04/08/20	S	P		x							
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au	[redacted]		**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 7/0.1	30	11/08/20	S	P		x								
Bore 7/0.5	31	11/08/20	S	P	x									
Bore 7/1.0	32	11/08/20	S	P		x								
Bore 8/0.1	33	04/08/20	S	P		x								
Bore 8/0.5	34	04/08/20	S	P		x								
Bore 8/1.0	35	04/08/20	S	P		x								
Bore 8/2.0	36	04/08/20	S	P		x								
Bore 8/3.0	37	04/08/20	S	P		x								
Bore 8/4.0	38	04/08/20	S	P		x								
Bore 8/5.0	39	04/08/20	S	P	x									
Bore 9/0.1	40	06/08/20	S	P		x								
Bore 9/0.5	41	06/08/20	S	P		x								
Bore 9/1.0	42	06/08/20	S	P		x								
Bore 10/0.1	43	04/08/20	S	P		x								
Bore 10/0.5	44	04/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

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Signed:	**Received by:**	**Date & Time:**	

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CHAIN OF CUSTODY DESPATCH SHEET

Project No: 103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab	
Project Name: Jerrabomberra	**Order Number**		
Project Manager	**Sampler:**	**Attn:**	
Emails: @douglaspartners.com.au		**Phone:** 612 9910 6200	
Date Required: Standard ☐		**Email:** @envirolab.com.au	
Prior Storage: ☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

	Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
45	Bore 10/1.0	44	04/08/20	S	P		x								
46	Bore 10/2.0	45	04/08/20	S	P	x									
47	Bore 10/3.0	46	04/08/20	S	P		x								
48	Bore 10/4.0	47	04/08/20	S	P		x								
49	Bore 11/0.1	48	07/08/20	S	P		x								
50	Bore 11/0.5	49	07/08/20	S	P		x								
51	Bore 11/1.0	50	07/08/20	S	P		x								
52	Bore 12/0.1	51	11/08/20	S	P	x									
53	Bore 12/0.5	52	11/08/20	S	P		x								
54	Bore 12/1.0	53	11/08/20	S	P		x								
55	Bore 13/0.1	54	05/08/20	S	P		x								
56	Bore 13/0.5	55	05/08/20	S	P		x								
57	Bore 13/1.0	56	05/08/20	S	P		x								
58	Bore 13/2.0	57	05/08/20	S	P		x								
59	Bore 13/3.0	58	05/08/20	S	P		x								
	PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** @douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

24923 1

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold								Notes/preservation
Bore 13/4.0	60	05/08/20	S	P		x								
Bore 13/5.0	61	05/08/20	S	P		x								
Bore 14/0.1	62	05/08/20	S	P		x								
Bore 14/0.5	63	05/08/20	S	P		x								
Bore 14/1.0	64	05/08/20	S	P		x								
Bore 14/2.0	65	05/08/20	S	P		x								
Bore 14/3.0	66	05/08/20	S	P		x								
Bore 14/4.0	67	05/08/20	S	P		x								
Bore 14/5.0	68	05/08/20	S	P	x									
Bore 14/6.0	69	05/08/20	S	P		x								
Bore 15/0.1	70	05/08/20	S	P		x								
Bore 15/0.5	71	05/08/20	S	P		x								
Bore 15/1.0	72	05/08/20	S	P		x								
Bore 15/2.0	73	05/08/20	S	P		x								
Bore 15/3.0	74	05/08/20	S	P		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No: 249251

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Hold		Asbestos ID						Notes/preservation
Bore 15/4.0	75	05/08/20	S	P		x								
Bore 16/0.1	76	05/08/20	S	P		x								
Bore 16/0.5	77	05/08/20	S	P		x								
Bore 16/1.0	78	05/08/20	S	P		x								
Bore 16/2.0	79	05/08/20	S	P		x								
Bore 16/~~3.0~~ 2.5	80	05/08/20	S	P		x								
Bore 16/4.0	81	05/08/20	S	P		x								
Bore 16/5.0	82	05/08/20	S	P		x								
Bore 17/0.1	83	10/08/20	S	P		x								
Bore 17/0.5	84	10/08/20	S	P		x								
Bore 17/1.0	85	10/08/20	S	P	x									
Bore 18/0.1	86	10/08/20	S	P		x								
Bore 18/0.5	87	10/08/20	S	P		x								
Bore 18/1.0	88	10/08/20	S	P		x								
R5	89	11/08/20	S	P		x								
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No: 249251

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

[redacted]

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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au		[redacted]	**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Analytes: Hold	Analytes	Analytes	Analytes	Analytes	Analytes	Analytes	Analytes	Notes/preservation
R6	98	11/08/20		P		x								
R7	99	11/08/20		P		x								
RR5	—	11/08/20		P		x								Please send to third party lab
RR6	—	11/08/20		P		x								Please send to third party lab
RR7	—	11/08/20		P		x								Please send to third party lab
R1	107			P		x								
R2	108			P		x								
R3	109			P		x								
R4	110			P		x								
Bore 19/0.1	100	05/08/20	S	P	x									
Bore 19/0.5	101	05/08/20	S	P		x								
Bore 19/1.0	102	05/08/20	S	P		x								
Bore 19/2.0	103	05/08/20	S	P		x								
Bore 19/3.0	104	05/08/20	S	P		x								
Bore 19/4.0	105	05/08/20	S	P		x								
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** SDG	**Transported to laboratory by:**	TNT
Send Results to: Douglas Partners Pty Ltd	**Address:** [redacted]@douglaspartners.com.au	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

24925)

[redacted]

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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Canberra
Attention	

Sample Login Details

Your reference	103028.01, Jerrabomberra
Envirolab Reference	249251
Date Sample Received	14/08/2020
Date Instructions Received	19/08/2020
Date Results Expected to be Reported	25/08/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	109 soil, 1 18, 3 water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: @envirolab.com.au	**Email: @envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 1-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 1-0.5																✓
Bore 1-1.0																✓
Bore 2-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 2-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 2-1.0											✓	✓	✓			
Bore 2-2.0																✓
Bore 2-3.0																✓
Bore 2-4.0																✓
Bore 2-5.0																✓
Bore 3-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 3-0.5																✓
Bore 3-1.0										✓						
Bore 4-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 4-0.5																✓
Bore 4-1.0																✓
Bore 4-2.0																✓
Bore 4-3.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 5-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 5-0.5																✓
Bore 5-1.0																✓
Bore 6-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 6-0.5																✓
Bore 6-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 6-2.0										✓						
Bore 6-3.0																✓
Bore 6-4.0																✓
Bore 6-5.0																✓
Bore 6-6.0																✓
Bore 7-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 7-0.5										✓						
Bore 7-1.0																✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 8-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 8-0.5																✓
Bore 8-1.0																✓
Bore 8-2.0																✓
Bore 8-3.0																✓
Bore 8-4.0																✓
Bore 8-5.0										✓						
Bore 9-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 9-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 9-1.0																✓
Bore 10-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 10-0.5																✓
Bore 10-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓			
Bore 10-2.0										✓						
Bore 10-3.0																✓
Bore 10-4.0																✓
Bore 11-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 11-0.5																✓
Bore 11-1.0																✓
Bore 12-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 12-0.5																✓
Bore 12-1.0																✓
Bore 13-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 13-0.5																✓
Bore 13-1.0																✓
Bore 13-2.0																✓
Bore 13-3.0																✓
Bore 13-4.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 13-5.0																✓
Bore 14-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 14-0.5																✓
Bore 14-1.0																✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
Bore 14-2.0																✓
Bore 14-3.0																✓
Bore 14-4.0																✓
Bore 14-5.0										✓						
Bore 14-6.0																✓
Bore 15-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 15-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 15-1.0																✓
Bore 15-2.0																✓
Bore 15-3.0																✓
Bore 15-4.0																✓
Bore 16-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 16-0.5																✓
Bore 16-1.0																✓
Bore 16-2.0																✓
Bore 16-3.0																✓
Bore 16-4.0																✓
Bore 16-5.0																✓
Bore 17-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 17-0.5																✓
Bore 17-1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 18-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 18-0.5																✓
Bore 18-1.0																✓
TB1	✓	✓														
TS2	✓															
TB2	✓	✓														
TS3	✓															
TB3	✓	✓														
RIN1														✓	✓	
RIN2														✓	✓	
RIN3														✓	✓	

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils	PFAS in Soils Short	Misc Inorg - Soil	CEC	Clay 50-120g	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	On Hold
R5	✓	✓	✓	✓	✓	✓	✓	✓	✓							
R6	✓	✓	✓	✓	✓	✓	✓	✓	✓							
R7																✓
Bore 19-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Bore 19-0.5											✓	✓	✓			
Bore 19-1.0																✓
Bore 19-2.0	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Bore 19-3.0																✓
Bore 19-4.0																✓
Bore 19-5.0																✓
R1																✓
R2																✓
R3																✓
R4																✓
TS1	✓															
TS4	✓															
TB4	✓	✓														

The '✓' 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.

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CERTIFICATE OF ANALYSIS 249251

Client Details

Client	Douglas Partners Canberra
Attention	
Address	PO Box 1487, Fyshwick, ACT, 2609

Sample Details

Your Reference	**103028.01, Jerrabomberra**
Number of Samples	110 soil, 3 water
Date samples received	14/08/2020
Date completed instructions received	19/08/2020

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.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	25/08/2020
Date of Issue	25/08/2020
Reissue Details	This report replaces R00 created on 25/08/2020 due to: matrix type error

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Analysed by Asbestos Approved Identifier:
Authorised by Asbestos Approved Signatory:

Results Approved By
, Team Leader, Inorganics
, Senior Chemist
, Senior Chemist
, Asbestos Supervisor
, Organics Development Manager, Sydney
Organics Supervisor

Authorised By

, Laboratory Manager

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	98	99	103	113	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	128	97	114	103	106

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	110	112	110	112	111

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	115	109	117	124	100

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	98	109	110	103	110

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-86	249251-89	249251-90	249251-91	249251-92
Your Reference	UNITS	Bore 18	TB1	TS2	TB2	TS3
Depth		0.1	-	-	-	-
Date Sampled		10/08/2020	4/08/2020	5/08/2020	5/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	[NA]	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	[NA]	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	[NA]	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	110%	<0.2	103%
Toluene	mg/kg	<0.5	<0.5	115%	<0.5	105%
Ethylbenzene	mg/kg	<1	<1	112%	<1	106%
m+p-xylene	mg/kg	<2	<2	113%	<2	107%
o-Xylene	mg/kg	<1	<1	114%	<1	108%
naphthalene	mg/kg	<1	<1	[NA]	<1	[NA]
Total +ve Xylenes	mg/kg	<3	<3	[NA]	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	105	106	103	104	100

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vTRH(C6-C10)/BTEXN in Soil						
Our Reference		249251-93	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	TB3	R5	R6	Bore 19	Bore 19
Depth		-	-	-	0.1	2.0
Date Sampled		6/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	20/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	20/08/2020	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	114	101	101	104	111

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		249251-111	249251-112	249251-113
Your Reference	UNITS	TS1	TS4	TB4
Depth		-	-	-
Date Sampled		11/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	[NA]	[NA]	<25
TRH C_6 - C_{10}	mg/kg	[NA]	[NA]	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	[NA]	[NA]	<25
Benzene	mg/kg	97%	109%	<0.2
Toluene	mg/kg	94%	112%	<0.5
Ethylbenzene	mg/kg	97%	112%	<1
m+p-xylene	mg/kg	96%	111%	<2
o-Xylene	mg/kg	97%	112%	<1
naphthalene	mg/kg	[NA]	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	[NA]	<3
Surrogate aaa-Trifluorotoluene	%	95	96	108

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svTRH (C10-C40) in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	110	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	130	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	52	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	52	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	190	100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	240	100	<50	<50	<50
Surrogate o-Terphenyl	%	87	89	86	98	84

svTRH (C10-C40) in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	96	86	87	102	87

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svTRH (C10-C40) in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	85	85	87	87	88

svTRH (C10-C40) in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	110
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	180
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	240
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	150
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	390
Surrogate o-Terphenyl	%	86	87	97	87	97

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svTRH (C10-C40) in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	88	88	87	87

svTRH (C10-C40) in Soil						
Our Reference		249251-86	249251-89	249251-91	249251-93	249251-97
Your Reference	UNITS	Bore 18	TB1	TB2	TB3	R5
Depth		0.1	-	-	-	-
Date Sampled		10/08/2020	4/08/2020	5/08/2020	6/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	120	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	120	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	89	85	86	85

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svTRH (C10-C40) in Soil					
Our Reference		249251-98	249251-100	249251-103	249251-113
Your Reference	UNITS	R6	Bore 19	Bore 19	TB4
Depth		-	0.1	2.0	-
Date Sampled		11/08/2020	5/08/2020	5/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	87	87	87	91

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PAHs in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	115	115	120	119	120

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	130	119	118	123	121

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	119	120	120	120	125

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.3
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	<0.1	<0.1	0.3
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.3
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.7
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	10
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	3.9
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	3.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	5.8
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	4.6
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	34
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	11
Surrogate p-Terphenyl-d14	%	121	120	119	123	121

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	121	123	122	123	124

Client Reference: 103028.01, Jerrabomberra

PAHs in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Naphthalene	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	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	122	119	127	121	121

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Surrogate TCMX	%	93	94	113	112	114

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	117	116	115	115

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

Client Reference: 103028.01, Jerrabomberra

Organochlorine Pesticides in soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	113	112	114

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	113	117	115	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

Client Reference: 103028.01, Jerrabomberra

Organophosphorus Pesticides in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

Client Reference: 103028.01, Jerrabomberra

PCBs in Soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	94	113	112	114

PCBs in Soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	124	113	113	116	114

Client Reference: 103028.01, Jerrabomberra

PCBs in Soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	113	117	115	115

PCBs in Soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	115	115	113	112	117

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PCBs in Soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	114	116	117	115

PCBs in Soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	114	122	116	115

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Acid Extractable metals in soil						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	5	4	<4	4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	78	42	48	28	45
Copper	mg/kg	10	23	14	12	14
Lead	mg/kg	14	60	20	72	36
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	10	10	7	8
Zinc	mg/kg	14	120	42	57	27

Acid Extractable metals in soil						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	49	56	31	46	34
Copper	mg/kg	8	9	11	17	10
Lead	mg/kg	6	12	26	9	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	14	6	6	16	7
Zinc	mg/kg	52	12	28	31	37

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Acid Extractable metals in soil						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	7	7	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	40	38	32	35	51
Copper	mg/kg	7	10	12	16	20
Lead	mg/kg	15	23	13	37	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	5	6	10	17
Zinc	mg/kg	13	33	16	120	40

Acid Extractable metals in soil						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	29	52	39	45	17
Copper	mg/kg	10	10	8	14	7
Lead	mg/kg	14	15	9	7	2
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	6	16	13	23
Zinc	mg/kg	16	14	16	46	11

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Acid Extractable metals in soil						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	36	59	36	24	35
Copper	mg/kg	12	21	14	13	14
Lead	mg/kg	12	12	21	28	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	15	10	10	13
Zinc	mg/kg	31	19	56	55	18

Acid Extractable metals in soil						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	41	50	52	52	43
Copper	mg/kg	17	8	20	19	14
Lead	mg/kg	35	30	10	23	34
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	5	14	12	10
Zinc	mg/kg	52	20	19	42	58

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Acid Extractable metals in soil			
Our Reference		249251-114	249251-115
Your Reference	UNITS	Bore 1 - [TRIPLICATE]	Bore 15 - [TRIPLICATE]
Depth		0.1	0.1
Date Sampled		11/08/2020	5/08/2020
Type of sample		soil	soil
Date prepared	-	19/08/2020	19/08/2020
Date analysed	-	19/08/2020	19/08/2020
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	49	44
Copper	mg/kg	12	14
Lead	mg/kg	12	11
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	7	9
Zinc	mg/kg	17	22

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Misc Soil - Inorg						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

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Misc Soil - Inorg						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

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Moisture						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-13
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 3
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	7.9	18	15	13	11

Moisture						
Our Reference		249251-14	249251-18	249251-19	249251-22	249251-24
Your Reference	UNITS	Bore 4	Bore 4	Bore 5	Bore 6	Bore 6
Depth		0.1	3.0	0.1	0.1	1.0
Date Sampled		6/08/2020	4/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	8.3	6.1	14	15	15

Moisture						
Our Reference		249251-25	249251-30	249251-31	249251-33	249251-39
Your Reference	UNITS	Bore 6	Bore 7	Bore 7	Bore 8	Bore 8
Depth		2.0	0.1	0.5	0.1	5.0
Date Sampled		4/08/2020	11/08/2020	11/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	25	16	32	9.3	6.3

Moisture						
Our Reference		249251-40	249251-41	249251-43	249251-45	249251-46
Your Reference	UNITS	Bore 9	Bore 9	Bore 10	Bore 10	Bore 10
Depth		0.1	0.5	0.1	1.0	2.0
Date Sampled		6/08/2020	6/08/2020	4/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	7.9	14	16	20	8.0

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Moisture						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	9.5	13	13	8.4	3.2

Moisture						
Our Reference		249251-68	249251-70	249251-71	249251-76	249251-83
Your Reference	UNITS	Bore 14	Bore 15	Bore 15	Bore 16	Bore 17
Depth		5.0	0.1	0.5	0.1	0.1
Date Sampled		5/08/2020	5/08/2020	5/08/2020	5/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	10	16	23	16	20

Moisture						
Our Reference		249251-85	249251-86	249251-97	249251-98	249251-100
Your Reference	UNITS	Bore 17	Bore 18	R5	R6	Bore 19
Depth		1.0	0.1	-	-	0.1
Date Sampled		10/08/2020	10/08/2020	11/08/2020	11/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	18/08/2020	18/08/2020	18/08/2020	18/08/2020	18/08/2020
Date analysed	-	19/08/2020	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Moisture	%	20	13	13	25	19

Moisture		
Our Reference		249251-103
Your Reference	UNITS	Bore 19
Depth		2.0
Date Sampled		5/08/2020
Type of sample		soil
Date prepared	-	18/08/2020
Date analysed	-	19/08/2020
Moisture	%	19

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Asbestos ID - soils						
Our Reference		249251-1	249251-4	249251-5	249251-11	249251-14
Your Reference	UNITS	Bore 1	Bore 2	Bore 2	Bore 3	Bore 4
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		11/08/2020	4/08/2020	4/08/2020	6/08/2020	6/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	31.93g	Approx. 30g	Approx. 30g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	YES	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - soils						
Our Reference		249251-18	249251-19	249251-22	249251-24	249251-30
Your Reference	UNITS	Bore 4	Bore 5	Bore 6	Bore 6	Bore 7
Depth		3.0	0.1	0.1	1.0	0.1
Date Sampled		4/08/2020	6/08/2020	4/08/2020	4/08/2020	11/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 45g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		249251-33	249251-40	249251-41	249251-43	249251-45
Your Reference	UNITS	Bore 8	Bore 9	Bore 9	Bore 10	Bore 10
Depth		0.1	0.1	0.5	0.1	1.0
Date Sampled		4/08/2020	6/08/2020	6/08/2020	4/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	Approx. 45g	Approx. 30g	Approx. 25g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

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Asbestos ID - soils						
Our Reference		249251-49	249251-52	249251-55	249251-60	249251-62
Your Reference	UNITS	Bore 11	Bore 12	Bore 13	Bore 13	Bore 14
Depth		0.1	0.1	0.1	4.0	0.1
Date Sampled		7/08/2020	11/08/2020	5/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 35g	Approx. 25g	Approx. 30g	Approx. 30g	Approx. 30g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

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Asbestos ID - soils						
Our Reference		249251-70	249251-71	249251-76	249251-83	249251-85
Your Reference	UNITS	Bore 15	Bore 15	Bore 16	Bore 17	Bore 17
Depth		0.1	0.5	0.1	0.1	1.0
Date Sampled		5/08/2020	5/08/2020	5/08/2020	10/08/2020	10/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	25.44g	Approx. 25g	Approx. 25g	Approx. 25g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	YES	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		249251-86	249251-97	249251-98	249251-100	249251-103
Your Reference	UNITS	Bore 18	R5	R6	Bore 19	Bore 19
Depth		0.1	-	-	0.1	2.0
Date Sampled		10/08/2020	11/08/2020	11/08/2020	5/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Sample mass tested	g	Approx. 30g	Approx. 25g	Approx. 25g	Approx. 30g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Client Reference: 103028.01, Jerrabomberra

PFAS in Soils Short						
Our Reference		249251-1	249251-13	249251-25	249251-31	249251-39
Your Reference	UNITS	Bore 1	Bore 3	Bore 6	Bore 7	Bore 8
Depth		0.1	1.0	2.0	0.5	5.0
Date Sampled		11/08/2020	6/08/2020	4/08/2020	11/08/2020	4/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	1.8	0.6	<0.1	0.2	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.7	0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	108	109	98	112	101
Surrogate $^{13}C_2$ *PFOA*	%	95	108	98	101	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	79	93	94	92	99
Extracted ISTD $^{13}C_4$ *PFOS*	%	64	69	79	76	85
Extracted ISTD $^{13}C_4$ *PFOA*	%	66	84	91	88	92
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	73	88	88	85	95
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	75	108	100	108	113
Total Positive PFHxS & PFOS	µg/kg	2.2	0.6	<0.1	0.2	<0.1
Total Positive PFOS & PFOA	µg/kg	2.5	0.7	<0.1	0.2	<0.1
Total Positive PFAS	µg/kg	2.9	0.7	<0.1	0.2	<0.1

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PFAS in Soils Short						
Our Reference		249251-46	249251-52	249251-68	249251-85	249251-100
Your Reference	UNITS	Bore 10	Bore 12	Bore 14	Bore 17	Bore 19
Depth		2.0	0.1	5.0	1.0	0.1
Date Sampled		4/08/2020	11/08/2020	5/08/2020	10/08/2020	5/08/2020
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020	20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	0.4	<0.1	<0.1	0.9
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	101	108	102	105	112
Surrogate $^{13}C_2$ *PFOA*	%	96	95	92	95	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%	103	93	99	104	92
Extracted ISTD $^{13}C_4$ *PFOS*	%	110	106	113	110	106
Extracted ISTD $^{13}C_4$ *PFOA*	%	110	108	105	103	99
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	95	113	98	97	180
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	102	106	107	97	#
Total Positive PFHxS & PFOS	µg/kg	<0.1	0.6	<0.1	<0.1	0.9
Total Positive PFOS & PFOA	µg/kg	<0.1	0.6	<0.1	<0.1	0.9
Total Positive PFAS	µg/kg	<0.1	0.8	<0.1	<0.1	0.9

Client Reference: 103028.01, Jerrabomberra

Misc Inorg - Soil				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020
pH 1:5 soil:water	pH Units	6.3	7.1	6.3

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CEC				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	21/08/2020	21/08/2020	21/08/2020
Exchangeable Ca	meq/100g	10	14	6.2
Exchangeable K	meq/100g	0.2	0.4	0.4
Exchangeable Mg	meq/100g	10	9.8	6.4
Exchangeable Na	meq/100g	0.50	0.94	0.67
Cation Exchange Capacity	meq/100g	21	25	14

Client Reference: 103028.01, Jerrabomberra

Clay 50-120g				
Our Reference		249251-6	249251-45	249251-101
Your Reference	UNITS	Bore 2	Bore 10	Bore 19
Depth		1.0	1.0	0.5
Date Sampled		4/08/2020	4/08/2020	5/08/2020
Type of sample		soil	soil	soil
Date prepared	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	24/08/2020	24/08/2020	24/08/2020
Clay in soils <2µm	% (w/w)	42	68	76

Client Reference: 103028.01, Jerrabomberra

vTRH(C6-C10)/BTEXN in Water				
Our Reference		249251-94	249251-95	249251-96
Your Reference	UNITS	RIN1	RIN2	RIN3
Depth		-	-	-
Date Sampled		5/08/2020	6/08/2020	10/08/2020
Type of sample		water	water	water
Date extracted	-	20/08/2020	20/08/2020	20/08/2020
Date analysed	-	20/08/2020	20/08/2020	20/08/2020
TRH C_6 - C_9	µg/L	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10
Benzene	µg/L	<1	<1	<1
Toluene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
o-xylene	µg/L	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	105	122	122
Surrogate toluene-d8	%	93	96	92
Surrogate 4-BFB	%	88	86	87

Client Reference: 103028.01, Jerrabomberra

svTRH (C10-C40) in Water				
Our Reference		249251-94	249251-95	249251-96
Your Reference	UNITS	RIN1	RIN2	RIN3
Depth		-	-	-
Date Sampled		5/08/2020	6/08/2020	10/08/2020
Type of sample		water	water	water
Date extracted	-	21/08/2020	21/08/2020	21/08/2020
Date analysed	-	22/08/2020	22/08/2020	22/08/2020
TRH C_{10} - C_{14}	µg/L	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100
Surrogate o-Terphenyl	%	105	107	99

Client Reference: 103028.01, Jerrabomberra

Method ID	Methodology Summary
AS1289.3.6.3	Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
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-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

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Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
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 are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
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.
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.
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.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

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QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			20/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	89	81
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	89	81
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	75	69
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	94	86
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	94	87
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	90	81
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	89	81
naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	113	1	98	110	12	112	103

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	33	<25	<25	0	80	82
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	33	<25	<25	0	80	82
Benzene	mg/kg	0.2	Org-023	[NT]	33	<0.2	<0.2	0	77	70
Toluene	mg/kg	0.5	Org-023	[NT]	33	<0.5	<0.5	0	82	87
Ethylbenzene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	81	87
m+p-xylene	mg/kg	2	Org-023	[NT]	33	<2	<2	0	77	82
o-Xylene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	76	81
naphthalene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	33	110	106	4	99	104

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	70	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	70	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	70	98	102	4	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	103	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	103	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	103	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	103	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	103	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	103	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	103	111	101	9	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	88	103
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	110	110	0	72	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	130	160	21	123	120
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	52	<50	4	88	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	190	220	15	72	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	110	10	123	120
Surrogate o-Terphenyl	%		Org-020	90	1	87	103	17	112	89

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	107	100
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	97	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	108	118
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	107	100
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	97	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	108	118
Surrogate o-Terphenyl	%		Org-020	[NT]	33	85	86	1	106	87

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	70	88	89	1	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	103	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	103	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	103	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	103	87	87	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	99
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	103
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	104
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	111	109
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	107
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	112
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	108	107
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	123	1	115	115	0	113	112

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	101
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	106
Fluorene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	105
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	113	109
Anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	107
Pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	109	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	118	114
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	33	<0.05	<0.05	0	107	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	33	119	118	1	121	117

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QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	70	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	70	121	122	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	103	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	103	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	103	121	121	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	101
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	98
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	99
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	105	103
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	104
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	127
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	86
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	110
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	105
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	118	1	93	93	0	92	91

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	96	97
HCB	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	111	108
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	103	97
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	108	105
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	105	103
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	106	104
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	101	95
Endrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	70	82
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	74	74
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	82	78
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	33	114	113	1	115	113

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	114	116	2	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	94
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	105
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	83
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	124
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	107
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	84
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	91
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	118	1	93	93	0	92	91

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	78	71
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	96	96
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	83	71
Malathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	80	92
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	97	97
Parathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	76	73
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	70	113
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	33	114	113	1	115	113

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	114	116	2	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date extracted	-			18/08/2020	1	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	118	116
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	118	1	93	93	0	92	91

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date extracted	-			[NT]	33	18/08/2020	18/08/2020		18/08/2020	18/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	120	118
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	33	114	113	1	115	113

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	70	114	116	2	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	103	18/08/2020	18/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	103	115	115	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date prepared	-			19/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Date analysed	-			19/08/2020	1	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Arsenic	mg/kg	4	Metals-020	<4	1	5	<4	22	103	86
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	104	85
Chromium	mg/kg	1	Metals-020	<1	1	78	43	58	102	87
Copper	mg/kg	1	Metals-020	<1	1	10	9	11	99	94
Lead	mg/kg	1	Metals-020	<1	1	14	11	24	101	108
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	88	97
Nickel	mg/kg	1	Metals-020	<1	1	8	6	29	103	86
Zinc	mg/kg	1	Metals-020	<1	1	14	12	15	103	102

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date prepared	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Date analysed	-			[NT]	33	19/08/2020	19/08/2020		19/08/2020	19/08/2020
Arsenic	mg/kg	4	Metals-020	[NT]	33	<4	<4	0	96	69
Cadmium	mg/kg	0.4	Metals-020	[NT]	33	<0.4	<0.4	0	98	71
Chromium	mg/kg	1	Metals-020	[NT]	33	40	34	16	98	85
Copper	mg/kg	1	Metals-020	[NT]	33	7	7	0	96	87
Lead	mg/kg	1	Metals-020	[NT]	33	15	14	7	98	71
Mercury	mg/kg	0.1	Metals-021	[NT]	33	<0.1	<0.1	0	95	77
Nickel	mg/kg	1	Metals-020	[NT]	33	6	5	18	99	77
Zinc	mg/kg	1	Metals-020	[NT]	33	13	10	26	98	88

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	19/08/2020	19/08/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	70	<4	5	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	70	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	70	36	78	74	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	70	12	13	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	70	12	11	9	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	70	8	15	61	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	70	31	32	3	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	19/08/2020	19/08/2020		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	103	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	103	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	103	43	42	2	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	103	14	15	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	103	34	30	12	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	103	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	103	10	11	10	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	103	58	49	17	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-4
Date prepared	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	102	101

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	249251-85
Date prepared	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			[NT]	33	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	33	<5	<5	0	103	103

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Date analysed	-			[NT]	70	20/08/2020	20/08/2020		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	70	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Date analysed	-			[NT]	103	20/08/2020	20/08/2020		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	103	<5	<5	0	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	249251-85
Date prepared	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Date analysed	-			20/08/2020	1	20/08/2020	20/08/2020		20/08/2020	20/08/2020
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	0.4	0.3	29	109	99
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	1.8	1.8	0	98	91
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	0.7	0.8	13	100	98
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	102	87
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	102	134
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	95	1	108	104	4	106	100
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	106	1	95	106	11	100	96
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	97	1	79	78	1	98	103
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	90	1	64	63	2	107	108
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	94	1	66	66	0	105	103
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	100	1	73	73	0	98	107
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	107	1	75	71	5	108	85

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
Date analysed	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Date analysed	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
Date analysed	-			20/08/2020	[NT]	[NT]	[NT]	[NT]	20/08/2020	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	111	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	117	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	117	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	107	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate toluene-d8	%		Org-023	92	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate 4-BFB	%		Org-023	88	[NT]	[NT]	[NT]	[NT]	115	[NT]

Client Reference: 103028.01, Jerrabomberra

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
Date analysed	-			21/08/2020	[NT]	[NT]	[NT]	[NT]	21/08/2020	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	82	[NT]
Surrogate o-Terphenyl	%		Org-020	116	[NT]	[NT]	[NT]	[NT]	72	[NT]

Client Reference: 103028.01, Jerrabomberra

Result Definitions	
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

Client Reference: 103028.01, Jerrabomberra

Quality Control 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.

Client Reference: 103028.01, Jerrabomberra

Report Comments

BTEX/TRH/PAH/OCP/OPP/PCB/Phenols of Bore 4/3.0 - out of recommended holding time

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 249251-1 for Cr. Therefore a triplicate result has been issued as laboratory sample number 249251-114.
- The laboratory RPD acceptance criteria has been exceeded for 249251-70 for Cr and Ni. Therefore a triplicate result has been issued as laboratory sample number 249251-115.
- Spike recovery for As in sample #85 at 69% which is outside lab acceptance criteria (70-130%), however, the LCS recovery is acceptable at 96%. Sample heterogeneity suspected.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

pH / EC
Samples were out of the recommended holding time for this analysis.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples were sub-sampled from jars provided by the client.

Sample 249251-4; Chrysotile asbestos identified in matted material, it is estimated to be 0.34g/kg in 31.93g of soil (i.e. > reporting limit for the method of 0.1g/kg).

Sample 249251-70; Loose fibre bundles of Chrysotile asbestos identified within the sample, however it is estimated less than the reporting limit for the method (i.e. < 0.1g/kg).

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager:	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.a	[redacted]		**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
116 M1	—	05/08/20	M	P				x						To be sent on Monday
117 M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
RR5	—	11/08/20	S	G	x									Please send to third party lab
RR6	—	11/08/20	S	G	x									Please send to third party lab
RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes** ☐

rec'd on 21/8/2020 10:30 RL

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Lab Report/Reference No:

Metals to Analyse: 8HM unless specified here:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address:** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

249251 - A

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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Canberra
Attention	

Sample Login Details

Your reference	103028.01, Jerrabomberra
Envirolab Reference	249251-A
Date Sample Received	14/08/2020
Date Instructions Received	21/08/2020
Date Results Expected to be Reported	28/08/2020

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	109 soil, 1 18, 3 water, 2 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: @envirolab.com.au	**Email: @envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	Asbestos ID - materials	On Hold
Bore 1-0.1		✓
Bore 1-0.5		✓
Bore 1-1.0		✓
Bore 2-0.1		✓
Bore 2-0.5		✓
Bore 2-1.0		✓
Bore 2-2.0		✓
Bore 2-3.0		✓
Bore 2-4.0		✓
Bore 2-5.0		✓
Bore 3-0.1		✓
Bore 3-0.5		✓
Bore 3-1.0		✓
Bore 4-0.1		✓
Bore 4-0.5		✓
Bore 4-1.0		✓
Bore 4-2.0		✓
Bore 4-3.0		✓
Bore 5-0.1		✓
Bore 5-0.5		✓
Bore 5-1.0		✓
Bore 6-0.1		✓
Bore 6-0.5		✓
Bore 6-1.0		✓
Bore 6-2.0		✓
Bore 6-3.0		✓
Bore 6-4.0		✓
Bore 6-5.0		✓
Bore 6-6.0		✓
Bore 7-0.1		✓
Bore 7-0.5		✓
Bore 7-1.0		✓

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Sample ID	Asbestos ID - materials	On Hold
Bore 8-0.1		✓
Bore 8-0.5		✓
Bore 8-1.0		✓
Bore 8-2.0		✓
Bore 8-3.0		✓
Bore 8-4.0		✓
Bore 8-5.0		✓
Bore 9-0.1		✓
Bore 9-0.5		✓
Bore 9-1.0		✓
Bore 10-0.1		✓
Bore 10-0.5		✓
Bore 10-1.0		✓
Bore 10-2.0		✓
Bore 10-3.0		✓
Bore 10-4.0		✓
Bore 11-0.1		✓
Bore 11-0.5		✓
Bore 11-1.0		✓
Bore 12-0.1		✓
Bore 12-0.5		✓
Bore 12-1.0		✓
Bore 13-0.1		✓
Bore 13-0.5		✓
Bore 13-1.0		✓
Bore 13-2.0		✓
Bore 13-3.0		✓
Bore 13-4.0		✓
Bore 13-5.0		✓
Bore 14-0.1		✓
Bore 14-0.5		✓
Bore 14-1.0		✓

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Sample ID	Asbestos ID - materials	On Hold
Bore 14-2.0		✓
Bore 14-3.0		✓
Bore 14-4.0		✓
Bore 14-5.0		✓
Bore 14-6.0		✓
Bore 15-0.1		✓
Bore 15-0.5		✓
Bore 15-1.0		✓
Bore 15-2.0		✓
Bore 15-3.0		✓
Bore 15-4.0		✓
Bore 16-0.1		✓
Bore 16-0.5		✓
Bore 16-1.0		✓
Bore 16-2.0		✓
Bore 16-3.0		✓
Bore 16-4.0		✓
Bore 16-5.0		✓
Bore 17-0.1		✓
Bore 17-0.5		✓
Bore 17-1.0		✓
Bore 18-0.1		✓
Bore 18-0.5		✓
Bore 18-1.0		✓
TB1		✓
TS2		✓
TB2		✓
TS3		✓
TB3		✓
RIN1		✓
RIN2		✓
RIN3		✓

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Sample ID	Asbestos ID - materials	On Hold
R5		✓
R6		✓
R7		✓
Bore 19-0.1		✓
Bore 19-0.5		✓
Bore 19-1.0		✓
Bore 19-2.0		✓
Bore 19-3.0		✓
Bore 19-4.0		✓
Bore 19-5.0		✓
R1		✓
R2		✓
R3		✓
R4		✓
TS1		✓
TS4		✓
TB4		✓
Bore 1 - [TRIPLICATE]-0.1		✓
Bore 15 - [TRIPLICATE]-0.1		✓
M1	✓	
M2	✓	

The '✓' 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.

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

CERTIFICATE OF ANALYSIS 249251-A

Client Details

Client	Douglas Partners Canberra
Attention	
Address	PO Box 1487, Fyshwick, ACT, 2609

Sample Details

Your Reference	**103028.01, Jerrabomberra**
Number of Samples	109 soil, 1 18, 3 water, 2 material
Date samples received	14/08/2020
Date completed instructions received	21/08/2020

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	28/08/2020
Date of Issue	25/08/2020

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with** *

Asbestos Approved By
Analysed by Asbestos Approved Identifier:
Authorised by Asbestos Approved Signatory:
Results Approved By
Asbestos Supervisor

Authorised By
Laboratory Manager

Client Reference: 103028.01, Jerrabomberra

Asbestos ID - materials			
Our Reference		249251-A-116	249251-A-117
Your Reference	UNITS	M1	M2
Depth		-	-
Date Sampled		05/08/2020	10/08/2020
Type of sample		material	material
Date analysed	-	25/08/2020	25/08/2020
Mass / Dimension of Sample	-	45x40x4mm	80x40x5mm
Sample Description	-	Beige fibre cement material	Beige fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected
Trace Analysis	-	[NT]	[NT]

Client Reference: 103028.01, Jerrabomberra

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.

Client Reference: 103028.01, Jerrabomberra

Result Definitions	
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

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2029214**		
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: [redacted]	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: [redacted]@douglaspartners.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 103028.01 Jerrabomberra	Page	: 1 of 3
Order number	: ----	Quote number	: EM2017DOUPAR0002 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Jerrabomberra		
Sampler	:		

Dates

Date Samples Received	: 19-Aug-2020 18:15	Issue Date	: 20-Aug-2020
Client Requested Due Date	: 27-Aug-2020	Scheduled Reporting Date	: **27-Aug-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 12.6 - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 6 / 6

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- **EA200: As only one sample container was submitted for multiple tests, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	*Client sampling date / time*	*Client sample ID*	SOIL - EA055-103 Moisture Content	SOIL - EA200G Asbestos Identification in Soils -	SOIL - EP035SF (solids) Total Phenol by Segmented Flow Analyser	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals
ES2029214-001	11-Aug-2020 00:00	RR5	✓	✓	✓	✓
ES2029214-002	11-Aug-2020 00:00	RR6	✓	✓	✓	✓
ES2029214-003	11-Aug-2020 00:00	RR7	✓	✓	✓	✓
ES2029214-004	11-Aug-2020 00:00	RR5		✓		
ES2029214-005	11-Aug-2020 00:00	RR6		✓		
ES2029214-006	11-Aug-2020 00:00	RR7		✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Issue Date	:	20-Aug-2020
Page	:	3 of 3
Work Order	:	ES2029214 Amendment 0
Client	:	DOUGLAS PARTNERS PTY LTD

Requested Deliverables

ACCOUNTS BRISBANE

- A4 - AU Tax Invoice (INV)	Email	brisbane@douglaspartners.com.au

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)	Email	accounts@douglaspartners.com.au
- *AU Certificate of Analysis - NATA (COA)	Email	[redacted]@douglaspartners.com.
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[redacted]@douglaspartners.com.
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[redacted]@douglaspartners.com.
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[redacted]@douglaspartners.com.
- Chain of Custody (CoC) (COC)	Email	[redacted]@douglaspartners.com.
- EDI Format - ENMRG (ENMRG)	Email	[redacted]@douglaspartners.com.
- EDI Format - ESDAT (ESDAT)	Email	[redacted]@douglaspartners.com.
- EDI Format - XTab (XTAB)	Email	[redacted]@douglaspartners.com.
- *AU Certificate of Analysis - NATA (COA)	Email	[redacted]douglaspartner
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[redacted]douglaspartner
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[redacted]douglaspartner
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[redacted]douglaspartner
- Chain of Custody (CoC) (COC)	Email	[redacted]douglaspartner
- EDI Format - ENMRG (ENMRG)	Email	[redacted]douglaspartner
- EDI Format - ESDAT (ESDAT)	Email	[redacted]douglaspartner
- EDI Format - XTab (XTAB)	Email	[redacted]douglaspartner

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:** Jerrabomberra	**To:** Envirolab
Project Name:	Jerrabomberra	**Order Number**	
Project Manager		**Sampler:**	**Attn:**
Emails:	@douglaspartners.com.a		**Phone:** 612 9910 6200
Date Required:	Standard ☐		**Email:** @envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM? Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Comb 8a	Hold	TRH and BTEX	Asbestos ID			pH, CEC, Cl			Notes/preservation
TS2	90	05/08/20	S	G			x							
TB2	91	05/08/20	S	G			x							
TS3	92	06/08/20	S	G			x							
TB3	93	06/08/20	S	G			x							
RIN1	94	05/08/20	W	G			x							
RIN2	95	06/08/20	W	G			x							
RIN3	96	10/08/20	W	G			x							
M1	—	05/08/20	M	P				x						To be sent on Monday
M2	—	10/08/20	M	P				x						To be sent on Monday
R5	97	11/08/20	S	G	x									
R6	98	11/08/20	S	G	x									
R7	99	11/08/20	S	G										
1 RR5	—	11/08/20	S	G	x									Please send to third party lab
2 RR6	—	11/08/20	S	G	x									Please send to third party lab
3 RR7	—	11/08/20	S	G	x									Please send to third party lab
PQL (S) mg/kg														**ANZECC PQLs req'd for all water analytes**

Environmental Division
Sydney
Work Order Reference
ES2029214

Telephone : + 61-2-8784 8555

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address** @douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

Relinquished by EDS SYD
19/8/20 1030 AM

249251

Rec- Soffa
19/8/20 1815
12C

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	103028.01	**Suburb:**	Jerrabomberra	**To:**	Envirolab
Project Name:	Jerrabomberra	**Order Number**			
Project Manager	[redacted]	**Sampler:**	[redacted]	**Attn:**	[redacted]
Emails:	[redacted]@douglaspartners.com.au			**Phone:**	612 9910 6200
Date Required:	Standard ☐			**Email:**	[redacted]@envirolab.com.au
Prior Storage:	☐ Fridge	Do samples contain 'potential' HBM?	Yes ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)	

Sample ID	Lab ID	Sampling Date	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: PFAS Suite	Analytes: Hold	Notes/preservation
R6	98	11/08/20		P		x	
R7	99	11/08/20		P		x	
4 RR5	—	11/08/20		P		x	Please send to third party lab
5 RR6	—	11/08/20		P		x	Please send to third party lab
6 RR7	—	11/08/20		P		x	Please send to third party lab
R1	107			P		x	
R2	108			P		x	
R3	109			P		x	
R4	110			P		x	
Bore 19/0.1	100	05/08/20	S	P	x		
Bore 19/0.5	101	05/08/20	S	P		x	
Bore 19/1.0	102	05/08/20	S	P		x	
Bore 19/2.0	105	05/08/20	S	P		x	
Bore 19/3.0	104	05/08/20	S	P		x	
Bore 19/4.0	103	05/08/20	S	P		x	
PQL (S) mg/kg							**ANZECC PQLs req'd for all water analytes** ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: **Relinquished by:** SDG **Transported to laboratory by:** TNT

Send Results to: Douglas Partners Pty Ltd **Address:** [redacted]@douglaspartners.com.au **Phone:** **Fax:**

Signed: **Received by:** **Date & Time:**

Relinquished by EDS Syd [redacted]
19/8/20 1000
CM

249251

Rec - 60 for 5 days
19/8/20 1815
12°C

[redacted]

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2029214**	Page	: 1 of 8
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	:	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020 18:15
Order number	: ----	Date Analysis Commenced	: 21-Aug-2020
C-O-C number	: ----	Issue Date	: 27-Aug-2020 16:52
Sampler	: ----		
Site	: Jerrabomberra		
Quote number	: EN/222		
No. of samples received	: 6		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Coordinator	Sydney Organics, Smithfield, NSW
	Analyst	Sydney Inorganics, Smithfield, NSW

Page	:	2 of 8
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

General Comments

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

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

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

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

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

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

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- **EA200: As only one sample container was submitted for multiple tests, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Page	:	3 of 8
Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		18.8	25.4	10.8	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	No	----	----
Asbestos (Trace)	1332-21-4	5	Fibres		No	No	No	----	----
Asbestos Type	1332-21-4	-	--		-	-	-	----	----
Sample weight (dry)	----	0.01	g		12.6	9.31	21.0	----	----
APPROVED IDENTIFIER:	----	-	--		A. SMYLIE	A. SMYLIE	A. SMYLIE	----	----
Synthetic Mineral Fibre	----	0.1	g/kg		No	No	No	----	----
Organic Fibre	----	0.1	g/kg		No	No	No	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		15	21	19	----	----
Copper	7440-50-8	5	mg/kg		<5	10	5	----	----
Lead	7439-92-1	5	mg/kg		12	<5	8	----	----
Nickel	7440-02-0	2	mg/kg		<2	7	3	----	----
Zinc	7440-66-6	5	mg/kg		10	7	6	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP035SF: Total Phenol by Segmented Flow Analyser									
Phenols (Total)	----	1	mg/kg		<1	<1	<1	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----

Page : 4 of 8
Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued									
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	RR5	RR6	RR7	----	----
				Client sampling date / time	11-Aug-2020 00:00	11-Aug-2020 00:00	11-Aug-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2029214-001	ES2029214-002	ES2029214-003	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		101	102	107	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		112	106	116	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		103	88.0	107	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		88.4	82.8	86.9	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		90.6	83.9	88.0	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		75.1	64.2	77.1	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		102	94.8	96.3	----	----
Anthracene-d10	1719-06-8	0.5	%		99.7	94.8	94.7	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		97.3	89.8	91.2	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		83.3	87.0	97.8	----	----
Toluene-D8	2037-26-5	0.2	%		91.8	96.6	103	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		96.6	97.1	100	----	----

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	RR5 - 11-Aug-2020 00:00	Mid brown soil.
EA200: Description	RR6 - 11-Aug-2020 00:00	Mid brown soil.
EA200: Description	RR7 - 11-Aug-2020 00:00	Mid brown soil.

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

Surrogate Control Limits

Sub-Matrix: **SOIL**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2029214**	Page	: 1 of 11
Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: [redacted]	Contact	: Customer Services ES
Address	: PO BOX 472 96 HERMITAGE ROAD WEST RYDE NSW, AUSTRALIA 1685	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020
Order number	: ----	Date Analysis Commenced	: 21-Aug-2020
C-O-C number	: ----	Issue Date	: 27-Aug-2020
Sampler	: ----		
Site	: Jerrabomberra		
Quote number	: EN/222		
No. of samples received	: 6		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
[redacted]	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Coordinator	Sydney Organics, Smithfield, NSW
	Analyst	Sydney Inorganics, Smithfield, NSW

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Work Order	:	ES2029214
Client	:	DOUGLAS PARTNERS PTY LTD
Project	:	103028.01 Jerrabomberra

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3213117)									
ES2029214-001	RR5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	10	43.7	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	9	27.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	10	8	21.7	No Limit
EP035SF: Total Phenol by Segmented Flow Analyser (QC Lot: 3214015)									
EP2008781-001	Anonymous	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.00	No Limit
ES2029214-003	RR7	EP035SF: Phenols (Total)	----	1	mg/kg	<1	<1	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3213120)									
ES2029124-003	Anonymous	EA055: Moisture Content	----	0.1	%	63.6	69.2	8.35	0% - 20%
ES2029215-001	Anonymous	EA055: Moisture Content	----	0.1	%	14.0	14.0	0.00	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3213116)									
ES2029124-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2029214-001	RR5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3210880)									
ES2028391-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2029214-002	RR6	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3210879)									
ES2028391-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3210879) - continued									
ES2028391-001	Anonymous	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES2029214-002	RR6	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3210879)									
ES2028391-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3210879) - continued									
ES2028391-001	Anonymous	EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
ES2029214-002	RR6	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3210878)									
ES2028391-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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Work Order : ES2029214
Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3210878) - continued									
ES2028391-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES2029214-002	RR6	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3210877)									
ES2028391-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit

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Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3210877) - continued									
ES2028391-001	Anonymous	EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2029214-002	RR6	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
ES2029215-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3210877)									
ES2028391-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
ES2029214-002	RR6	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
ES2029215-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 3212269)									
ES2029196-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES2029215-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

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Project : 103028.01 Jerrabomberra

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3213117)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	98 mg/kg	116	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	84.2	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15.4 mg/kg	123	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	48 mg/kg	113	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	50 mg/kg	113	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	12.4 mg/kg	107	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	115 mg/kg	109	70.0	130
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 3214015)								
EP035SF: Phenols (Total)	----	1	mg/kg	<1	20 mg/kg	101	60.0	102
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3213116)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.0847 mg/kg	97.4	70.0	105
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3210880)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	110	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	99.3	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	101	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.0	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	79.7	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	64.0	122

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Client : DOUGLAS PARTNERS PTY LTD
Project : 103028.01 Jerrabomberra

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879) - continued								
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	87.8	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3210879)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.2	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	90.5	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.7	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	85.9	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	75.1	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	86.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	76.0	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.1	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	62.6	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3210878)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	97.1	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	98.9	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	106	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	109	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	105	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	106	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	95.0	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	102	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	99.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	98.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	93.9	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3210877)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	97.9	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	106	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	102	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3212269)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	78.5	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3210877)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	102	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	103	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	92.5	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3212269)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	83.4	68.4	128
EP080: BTEXN (QCLot: 3212269)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	89.2	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	103	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	98.6	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	100	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.0	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3213117)							
ES2029124-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.3	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	94.1	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	96.3	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	94.1	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	98.0	70.0	130
EP035SF: Total Phenol by Segmented Flow Analyser (QCLot: 3214015)							
EP2008781-001	Anonymous	EP035SF: Phenols (Total)	----	20 mg/kg	102	70.0	130

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Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3213116)							
ES2029124-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	78.6	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3210880)							
ES2028391-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	116	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3210879)							
ES2028391-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	117	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	118	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	87.8	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	90.3	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	105	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3210879)							
ES2028391-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	82.7	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	84.3	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	77.4	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	75.9	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	79.5	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3210878)							
ES2028391-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	102	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	101	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3210877)							
ES2028391-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	104	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	112	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	127	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	118	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3210877)							
ES2028391-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	115	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	116	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	123	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	106	70.0	130
EP080: BTEXN (QCLot: 3212269)							
ES2029196-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	104	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	82.9	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	84.5	70.0	130

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Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 3212269) - continued							
ES2029196-002	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	83.9	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.0	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	82.5	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

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Client	: **DOUGLAS PARTNERS PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	:	Telephone	: +61-2-8784 8555
Project	: 103028.01 Jerrabomberra	Date Samples Received	: 19-Aug-2020
Site	: Jerrabomberra	Issue Date	: 27-Aug-2020
Sampler	: ----	No. of samples received	: 6
Order number	: ----	No. of samples analysed	: 3

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

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

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Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Total Metals by ICP-AES	1	20	5.00	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / *Container / Client Sample ID(s)*	*Sample Date*	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	*Date analysed*	*Due for analysis*	*Evaluation*
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) RR5, RR6, RR7	**11-Aug-2020**	**----**	----	----	**21-Aug-2020**	25-Aug-2020	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - ACM/Asbestos Grab Bag (EA200) RR5, RR6, RR7	**11-Aug-2020**	**----**	----	----	**24-Aug-2020**	07-Feb-2021	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	07-Feb-2021	✓	**25-Aug-2020**	07-Feb-2021	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	08-Sep-2020	✓	**25-Aug-2020**	08-Sep-2020	✓
EP035SF: Total Phenol by Segmented Flow Analyser							
Soil Glass Jar - Unpreserved (EP035SF) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**24-Aug-2020**	25-Aug-2020	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓

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Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**26-Aug-2020**	30-Sep-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	30-Sep-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) RR5, RR6, RR7	**11-Aug-2020**	**21-Aug-2020**	25-Aug-2020	✓	**25-Aug-2020**	25-Aug-2020	✓

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Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

Evaluation: ✘ = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	13	15.38	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	10.00	✘	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Phenol By Discrete Analyser	EP035SF	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Total Phenol By Discrete Analyser	EP035SF	SOIL	In house: Referenced to ISO 14402. Phenols are extracted in 1M NaOH. The extract is diluted by 10 and then in-line-distilled at pH 1- 4. The distillate, containing steam-volatile phenolic compounds is then oxidised by hexacyanoferrate(III). The resulting quinones react with 4-aminoantipyrine forming red condensation products, which are measured spectrometrically in a flow spectrometer at 505 nm. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Extraction for Total Phenols in soil	EP035-PR	SOIL	In house: Soil sub-sample is extracted in 1M NaOH by tumbling for between 6 and 16 hours. The resulting extract is diluted 10 times with reagent grade water prior to analysis.
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

Attachment 4 Unexpected Finds Protocol

In general, environmental assessments are based on results from a desktop review of land use history and a statistically designed investigation program; actual conditions may vary from those expected during intrusive excavation works, and evidence of contamination may be encountered where it was not previously reported.

These unexpected finds may include soils that are observed to have a visual impact (staining, discoloration), olfactory impact (odour) and/or may be impacted with anthropogenic inclusions (demolition waste, asbestos, putrescible or other wastes, etc.).

Unexpected finds (typical to Canberra, in general) may include (but are not limited to) the following:

- **Fill incorporating demolition wastes**: Historically, poor demolition and waste disposal practices has led to the unsystematic occurrence of fill incorporating demolition wastes (also known as "builders waste") being present throughout Canberra. This may be indicated by the presence of anthropogenic material, such as concrete rubble, bricks, plastic, metal, sheeting, and other materials associated with demolished built structures.

  Of concern was the prevalence of asbestos in domestic building materials until their use was banned in the 1980s (and later complete ban in 2003 of asbestos in all products). Bonded asbestos (i.e. cement sheeting, eaves, cladding, roof tiles/shingles) and to a lesser extent fibrous asbestos (i.e. pipe lagging, boiler insulation, sprayed insulation) can be co-located with demolition wastes, particularly those from buildings pre-dating the 1980s.
- **Visual or olfactory signs of soil contamination**: This may include a hydrocarbon odour, ash, cinders or slag, or soil staining. These signs of contamination may be associated with disposal of industrial/ commercial wastes (i.e. incinerator wastes) or spills or leaks (e.g. from storage of hydrocarbon fuels or lubricants).

It is the responsibility of the Project Manager (Lendlease or their delegate) to ensure that all personnel involved with intrusive works are inducted to the UFP. Where applicable, additional training to deal with unexpected finds may be required, for example the Asbestos Awareness Course which is mandatory for the construction industry in the ACT.

In the event that unexpected finds of potential contamination are identified during works, the procedures outlined below.

Action	Responsibility
AWARENESS All site workers involved with intrusive works are to be inducted into the UFP.	Project Manager Contractors SQEC
UNEXPECTED FIND ENCOUNTERED 1. **STOP WORK –** All excavation in the immediate area to cease to minimise further disturbance of any contaminated soil which may increase an exposure risk to nearby workers. 2. **MAKE SAFE –** Following cessation of nearby works, the area should be made safe by the implementation of an '**EXCLUSION AREA**'. This must include physical demarcation using safety cones, hazard tape (or similar) at a minimum. If a larger area of contamination is identified, where works will occur over longer timeframes, the area should be protected by fencing. Site workers to be notified and advised not to disturb the find. If safe to do so, the unexpected finds may be covered with clean soil to limit the risk of exposure. This may be discussed with the SQEC on a case by case basis. 3. **NOTIFY** – Notify the Site Supervisor, Foreman or similarly responsible persons who will contact the SQEC to inspect the find.	PC Contractors

ASSESSMENT OF THE FIND SQEC to undertake an assessment to determine the nature and extent of the find including any interim management measures.	SQEC
NOTIFICATION Notify the relevant regulatory authorities of the find. **Note**: If asbestos containing materials are encountered, the DM (or delegate) to notify Worksafe ACT and submit a Dangerous Occurrence Report (DS-238) within 48 hours. The SQEC to assist with describing the occurrence and any implemented management measures.	PM SQEC
REMEDIATION Manage, remove, or treat the contamination in accordance with the applicable EPA regulations, laws, guidelines, and industry practice in accordance with advice from the SQEC. Depending on the nature and extent of the find, a Remediation Action Plan (RAP) may need to be prepared and submitted to the Auditor (if still under Audit) or the EPA for review and approval. If the management approach includes off-site disposal of contaminated soil, EPA approval will be required and will be managed by the SQEC.	PC Contractors SQEC
VALIDATION Validation demonstrating the successful removal or management of the find may be required. The SQEC to advise what may be appropriate depending on the nature of the find. The identification, assessment, management and validation of the unexpected find(s) must be documented by the SQEC in the form of a validation report (or letter/memorandum for minor finds), which should be submitted for review by the Contaminated Land Auditor (if still under Audit) or the EPA.	SQEC
RESUME INTRUSIVE WORK Following successful validation, or as advised by the SQEC (and potentially the EPA), excavation works can resume subject to the ongoing implementation of the UFP.	PC Contractors SQEC

Typical types of contamination that may be encountered during bulk excavations works are shown below.



Photograph 1: Ash layer in soil



Photograph 2: Stained soils



Photograph 3: Bonded asbestos



Photograph 4: Demolition wastes in soil



Photograph 5: Municipal wastes



Photograph 6: Municipal wastes