Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Reference: SII 5183– AA

Sydney Sotherby's International Realty
Suite 303, Level 3/45-51 Cross St, Double Bay NSW 2028

Preliminary Site Investigation

1 Hunter Street, Muswellbrook NSW 2333
Lot 1 of DP 995228

1/78 Owen Street,
Glendenning NSW 2761
Australia
ABN: 44 106 976 738
Phone: (02) 9675 7522
Fax: (02) 9675 7544
Email: office@csts.net.au
Web: www.csts.net.au

Enquiries regarding this project are to be directed to the undersigned

Document Status	
Author:	**Approved by:**
Karl Davis Karl@csts.net.au Environmental Consultant Compaction & Soil Testing Services	Paul Scrimshaw Paul@csts.net.au Environmental Consultant Compaction & Soil Testing Services

Revision Number	**Status**	**Date**
0	Final	24-May-24

Executive Summary

Compaction & Soil Testing Services [CSTS] has been engaged by Sydney Sotherby's International Realty to conduct a Preliminary Site Investigation for the site known as 1 Hunter Street, Muswellbrook NSW 2333 [the site]. This assessment has been conducted in accordance with *NSW EPA Consultants reporting on contaminated land 2020* [1]. It is currently understood that the site is under assessment for residential subdivision.

The objectives of this investigation were to:

- Determine the potential for site contamination,
- Assess whether the site is suitable, from a contamination perspective, for residential land use,
- Provide conclusions and recommendations regarding the contamination status of the site, and the need for potential further investigation.

In order to achieve the objectives of this report, the following scope of works was undertaken;

- Site inspection to determine the existing site condition and potential areas of environmental concern,
- Excavation of twenty (20) boreholes for the assessment of material condition and the recovery of samples,
- Recovery and laboratory transfer of twenty (20) primary soil samples and two (2) duplicates,
- Comparison of laboratory results with appropriate assessment criteria,
- A review and synthesis of data from the Asbestos Containing Material report (N5294-ACM-R1-191023 undertaken by Hazmat Services Pty Ltd [9].
- Review of NSW Historical Imagery via the NSW Historical Imagery Viewer [10].
- Correlation of data and compilation of this Preliminary Site Investigation Report.

The area of interest for this report does not include the area of the two rectangular, dilapidated sheds on the eastern portion of the site. The designated area of investigation had an area of approximately 3000m^2. This area is subject to a separate report (REF: SII 5183– AB). Refer to **Appendix A: Drawings.**

The area of investigation for this report consists of the areas subject to the proposed development, that is, the back of the site and towards the centre and east areas of the site, to the east of the milk factory. Information from the client has revealed the area of the milk factory is not going to be affected by the proposed development and the brick cottages on the centre east portion of the site are also not going to be affected by the proposed development, at least initially.

Based on the observed site conditions and the available historical and landscape information, a number of potential contaminants of concern have been identified. These include Heavy Metals, TRH, BTEXN, PAH, PCB, OCP, OPP and Asbestos. Potential exposure pathways for these contaminants have been identified as dermal contact, ingestion, inhalation and plant

uptake. The identified human receptors include current and future site users, construction workers the neighbouring community. Ecological receptors include those located at Sandy creek, the Hunter River and any terrestrial wildlife receptors in the area.

As the site is to be developed into residential land with soil access, CSTS considers the appropriate Health Investigation Level (HIL) to be HIL 'A'; Standard residential with garden/accessible soil (home grown produce). The soil Health Screening Levels (HSLs) for vapour intrusion used are the HSL-As for low density residential sites. Ecological Investigation Levels have been derived from the 'Urban residential and public open space' and Management Limits have been derived from 'Residential, parkland and public open space'. Therefore, the results of the laboratory analysis have been compared to the Residential A Health Investigation Levels/Health Screening Levels, Ecological Investigation Levels and Management Limits detailed within the *NEPC National Environmental Protection (Assessment of Site Contamination) Measure* [3].

The laboratory analysis detected Arsenic, Chromium, Copper, Lead, Mercury, Nickel, Zinc, TRH(F3), TRH(F4), Aldrin + dieldrin within the recovered samples. No concentrations were found to exceed the adopted assessment criteria.

No concentrations of BTEX, TRH (F1, F2), PAH compounds, OPP, PCB or Asbestos were detected above the laboratory limits of reporting within any of the recovered samples.

Based on the conducted assessment, CSTS has concluded that the site known as 1 Hunter Street, Muswellbrook NSW 2333, excluding the area subject to SII 5178 – AB, can be made suitable, from a contamination perspective, for residential land use with soil access opportunities, providing the following recommendations are implemented.

- If any demolition of existing structures is to be undertaken it should be conducted in accordance with the recommendations of the asbestos-containing materials survey conducted by Hazmat Services Pty Ltd in 2023.
- The site is generally made clean from anthropogenic deposits such as the rubbish in the back area of the site.

CSTS recommends that, during the process of development, should any indicators of potential contamination be encountered, this office is to be contacted immediately for further assessment. Should there be any change in the proposed development, all conclusions and recommendations are to be reviewed. Specifically, if the proposed development will involve an alternate final land use, the findings of this report will require revision and further assessment may be necessary.

Should you have any queries about the methodology, findings, conclusion or recommendations of this Preliminary Site Investigation, please do not hesitate to contact our office on (02) 9675 7522.

Table of Contents

1. Introduction

1.1. Background

Compaction & Soil Testing Services [CSTS] has been engaged by Sydney Sotherby's International Realty to conduct a Preliminary Site Investigation for the site known as 1 Hunter Street, Muswellbrook NSW 2333 [the site]. This assessment has been conducted in accordance with *NSW EPA Consultants reporting on contaminated land 2020* [1]. It is currently understood that the site is under assessment for residential subdivision.

1.2. Objectives

The objectives of this investigation were to;

- Determine the potential for site contamination
- Assess whether the site is suitable, from a contamination perspective, for the proposed development
- Provide conclusions and recommendations regarding the contamination status of the site, and the need for potential further investigation.

2. Scope of Works

In order to achieve the objectives of this report, the following scope of works was undertaken;

- Site inspection to determine the existing site condition and potential areas of environmental concern,
- Excavation of twenty (20) boreholes for the assessment of material condition and the recovery of samples,
- Recovery and laboratory transfer of twenty (20) primary soil samples and two (2) duplicates,
- Comparison of laboratory results with appropriate assessment criteria,
- A review and synthesis of data from the Asbestos Containing Material report (N5294-ACM-R1-191023 undertaken by Hazmat Services Pty Ltd [9].
- Review of NSW Historical Imagery via the NSW Historical Imagery Viewer [10].
- Correlation of data and compilation of this Preliminary Site Investigation Report.

3. Site Identification

The site known as 1 Hunter Street, Muswellbrook NSW 2333 [the site] covers an area of approximately 9.61ha. The site is legally identified as Lot 1 of DP 995228. The site is bound to the north and east by residential properties and to the northwest by a row of trees then a railway line which runs parallel to the New England Highway just beyond that. The site is bordered to the south by Hunter Street, empty grassed lot and residential properties.

The Hunter River sits approximately 400m west of the site. Sandy creek which runs south into the Hunter River, sits approximately 120m west of the site.

The area of the large abandoned milk factory is zoned as E4: General Industrial whereas the rest of the site is zoned as R1: General Residential [11]. It is understood the area of the milk factory will remain zoned as E4: General Industrial while the middle and back areas of the site will become zoned for residential.

The area of investigation for this report consists of the areas subject to the proposed development, that is, the back of the site and towards the centre and east areas of the site, to the east of the milk factory. Information from the client has revealed the area of the milk factory is not going to be affected by the proposed development. Information from the client has revealed the buildings on-site will be remaining on-site, at least initially, aside from the sheds which will be demolished.

The area of interest for this report does not include the area of the two rectangular, dilapidated sheds on the eastern portion of the site. The designated area of investigation had an area of approximately 3000m^2. This area is subject to a separate report (REF: SII 5183– AB*).* Refer to **Appendix A: Drawings.**

4. Site Observations

At the time of the CSTS site inspection on 23 April 2023, the site consisted of three (3) areas distinct focus areas; the back of the site, the middle and the front of the site. The focus areas were chosen based on the location of the proposed development.

4.1 Back Area

The back of the site generally consisted of an overgrown grassed area with weeds, shrubs and trees in the northeast portion of the site. The area was approximately 20,000m^2 and sloped down to the northwest. The area was bordered by residential properties to the east and southeast. The area was bordered to the west by a row of tress then a railway line running parallel to the New England Highway just beyond it. To the southwest of the area was a car workshop shed with an approximate area of 1200m^2.

At the time of investigation, there was rubbish that had been dumped in this area. The rubbish in the back area consisted of bricks, timber, wood, hardboard, metal sheeting, ceramic tiles and plastic items (wheelie bin, a pram, and chairs). During the inspection, no indicators of significant contamination, such as the staining or discolouration of sub-surface material, or the emission of odours, was observed.

Five (5) boreholes were drilled using a mounted drill rig. Five (5) samples were taken in the back area at a depth of between 100mm – 150mm. The material in the area consisted of gravelly orange brown sandy clay fill material with high organics and occasional ironstone.

Non-friable ACM was previously identified by Hazmat Services in the car workshop shed which borders the back area to the southwest. ACM was identified in the walls of the building and a damaged gable infill. The damaged gable infill was removed by a Class A licensed removalist in 2023. An Asbestos Clearance Report was then provided by Hazmat Services for

the material [9]. A thorough search for asbestos containing materials (ACM) was conducted in the area; however, none was found at the time of investigation.

4.2 Middle Area

The middle focus area of the site was generally consisted of a grass field area containing an amenities block, toilet block, four (4) cottages and a plant room. All of these buildings were constructed with brick. Non-friable ACM had been identified in all of these buildings in the Hazmat Services 2023 ACM survey; however, these buildings were generally in good condition and no ACM was found at the time of investigation.

The area is bound by a road to the northeast by the shed area subject to report SII 5183 – AB, residential properties to the east, Hunter Street and residential properties to the south and Hunter Street to the west with the heritage listed milk factory just beyond the street.

Fifteen (15) boreholes were drilled using a mounted drill rig. Fifteen (15) samples were taken in the middle area at a depth of between 100mm – 150mm. The material in the area consisted of brown clay loam or sandy clay loam with high organics.

During the visual inspection, no indicators of significant contamination, such as the staining or discolouration of sub-surface material, or the emission of odours, was observed. No ACM was found at the time of investigation. The only foreign materials observed were occasional pieces household plastic rubbish.

4.3 Front Area

The front area is located on the south most section of the site. The front area consisted of an approximately 8200m^2 overgrown grass field with a building of unknown purpose measuring approximately 150m^2 on the southern section. The area is bordered by the entrance to the factory to the north/northeast, Hunter Street to the east, a row of tress then a railway line to the west and an empty grassed lot to the south.

Five (5) boreholes were drilled using a mounted drill rig. Five (5) samples were taken in the back area at a depth of between 100mm – 150mm. The material sampled in the area consisted of orange brown sandy clay fill or sandy clay loam material with high organics with ironstone inclusions.

During the visual inspection, no indicators of significant contamination, such as the staining or discolouration of sub-surface material, or the emission of odours, was observed. No ACM or foreign materials were found at the time of investigation.

Refer to **Appendix A – Site Drawings** and **Appendix B – Site Photographs.**

5. Landscape Characteristics

According the New South Wales Department of Planning and Environment's web tool – eSpade, the site is on the Roxburgh soil landscape [7].

This soil landscape covers undulating low hills and undulating hills. yellow podzolic soils (Dy3.11, Dy2.41) occur on upper to midslopes with Red Solodic Soils (Dr2.43) on more rounded hills. Lithosols (Um5.21) occur on crests. Brown Podzolic soils (Db2.21) occur on

slopes on conglomerate with associated flat pavements. Yellow Soloths (Dy3.41) have been recorded in some gullies.

The qualities and limitations of this landscape include localised complex soils, localised mass movement hazard, localised foundation hazard, localised complex terrain, localised recharge zone, localised discharge zone, localised salinity hazard, widespread gully erosion hazard, widespread sheet erosion hazard, localised streambank erosion hazard, localised high run-on, localised poor drainage, localised seasonal waterlogging.

The landscape consists of undulating low hills and undulating hills with elevations of 80 – 370 m. Slopes are 0 – 10%, with slope lengths of 800 – 1,200 m. Local relief is 60 – 120 m. Drainage lines occur at intervals of 300 – 1,500 m.

CSTS notes that nine (9) groundwater bores are located within 1km of the site. These were drilled to depths ranging from 8.5m to 19m bgl [12]. Based on the elevation contours, measured depth of groundwater and proximity to the Hunter River, CSTS anticipates the groundwater flows westerly towards the Hunter River.

6. Regulatory Searches

Within 1km of the site, no sites were found to be included within the list of NSW contaminated sites notified to the EPA.

Within 1km of the site, no sites currently hold Environment Protection Licences.

Within 1km of the site, the POEO Public Register contains a surrendered license from The Upper Hunter County Council for the miscellaneous licensed discharge to waters (at any time).

7. Site History

A summary of the sites known historical uses from aerial imagery and historical documentation is provided below in **Table 1**.

Table 1: Summary of Historical use of the site and its surroundings

Date			
1958			
	Site	Surroundings	
	Construction of the factory had begun in 1945 and appears to be complete in 1958. Two (2) buildings can be seen in the east portion of the site and three (3) can be seen in the southeast portion. It is not clear what the purpose of these buildings is.	The surrounding land is not built up to a significant degree. The railway line can be seen bordering the site to the west. The area to the north east of the site appears ploughed, possibly indicating agriculture.	

1974

Site	Surroundings
Development on the factory is continuing. Multiple buildings have been built on the site. The sheds in the area subject to report SII 5183 – AB appear to have been built. Likewise, the brick cottages appear to have built on the east boundary. The back area has been cleared to a degree and no pattern can be seen.	To the southeast a residential zone has been created. The New England Highway and the railway line have been built up. Hunter Street to the South has also been built up.

1993	

Site	Surroundings
The approximate boundary of the site can be determined. The buildings on the site appear to be the same as are currently present. More land toward the centre of the site has been cleared of trees. It is now clear the brick cottages are present on site. The car workshop shed currently on-site has been built.	The surrounding land has not changed significantly but increasing development of Muswellbrook can be seen, particularly of residential properties to the east.

2014	

Site	**Surroundings**
The site appears relatively similar. The back area has been cleared. More trees appear to be present on-site.	The surrounding land has not changed significantly but increasing development of Muswellbrook can be seen, particularly of residential properties to the north.

2021	

Site	Surroundings
The site appears relatively similar.	The surrounding land has not changed significantly but increasing development of Muswellbrook can be seen, particularly of residential properties to the north.

2024		
	Site	**Surroundings**
	The site appears relatively similar. The buildings on the site appear to have aged to an extent and appear in slightly worse condition.	The surroundings appear relatively similar.

8. Conceptual Site Model

The conceptual site model containing potential contaminants of concern, likely sources, potential pathways and receptors is presented in **Table 2**.

Table 2: Conceptual Site Model

Contaminant of Concern	Sources	Potential Pathways	Receptors
Asbestos	• Poor demolition practices • Potential historic filling from unknown origins • Materials within existing structures.	• Airborne migration of fibres	• Current site users • Future site users • Construction workers • Neighbouring community • The Hunter River • Sandy Creek • Terrestrial wildlife receptors
Heavy Metals	• Historic building construction, particularly Lead based paints, leaching from Zinc-plated roofing and Arsenic from treated timbers • Potential historic filling from unknown origins • Vehicle exhaust depositions • Chemicals associated with the milk factory • Atmospheric deposits from mining operations in the area	• Dermal Contact • Ingestion • Plant uptake • Groundwater infiltration	• Current site users • Future site users • Construction workers • The Hunter River • Sandy Creek • Terrestrial wildlife receptors
BTEX	• Spills & leaks from stored fuels & vehicles • Vehicle deposition	• Dermal Contact • Ingestion • Plant uptake • Groundwater infiltration	• Current site users • Future site users • Construction workers • The Hunter River • Sandy Creek • Terrestrial wildlife receptors

TRH	• Spills & leaks from stored fuels & vehicles • Vehicle deposition • Vehicle & plant maintenance • Spills and leaks of chemicals associated with the milk factory	• Dermal Contact • Inhalation • Ingestion • Plant uptake • Groundwater infiltration	• Current site users • Future site users • Construction workers • The Hunter River • Sandy Creek • Terrestrial wildlife receptors
PAH	• Potential buried ash • Vehicle deposition • Chemicals associated with the milk factory	• Dermal Contact • Inhalation • Ingestion • Groundwater infiltration	• Current site users • Future site users • Construction workers • The Hunter River • Sandy Creek • Terrestrial wildlife
Pesticides	• Possible use within garden areas • Historic application	• Dermal Contact • Ingestion • Plant uptake • Groundwater infiltration	• Current site users • Future site users • Construction workers • The Hunter River • Sandy Creek • Terrestrial wildlife
PCB	• Hydraulic fluids • Electrical equipment	• Dermal Contact • Ingestion	• Current site users • Future site users • Construction workers

9. Data Quality Objectives

The Data Quality Objective [DQO] process was applied to the investigation to ensure that all data collection activities were appropriate and achieved the project objectives. The DQO process consists of seven (7) steps, outlined below, which define the type, quality, and quantity of data needed to support decisions relating to the environmental condition of a site.

9.1. Step 1: State the problem

The site has a number of potential sources of contamination, as outlined within Section 6. The 'problem' as it stands, is that the site may contain contamination which has the potential to affect the suitability of the property. The purpose of this investigation is to determine the condition of the soil within the site and to provide recommendations where necessary. CSTS notes that groundwater may be encountered during development, though assessment of groundwater condition was not included within this preliminary site investigation.

9.2. Step 2: Identify the decision

Data is required in order to determine the condition of the soil within the site. It will be necessary to decide: 'Is the site suitable for residential land use?' To allow for the decision to be made, it will be necessary to consider the following questions;

- What are the potential sources of contamination at the site?
- Does the material within the site contain contaminants?
- Where contaminants are present, do the concentrations have the potential to adversely impact on human health or the environment?
- What, if any, further remediation action is required?

9.3. Step 3: Identify inputs for the decision

Key data required for the decision making process includes:

- Visual assessment of the site and material condition,
- Identification of the concentration of potential soil contaminants,
- Comparison of the results of the laboratory analysis to the applicable guidelines to evaluate the suitability of the site for the proposed development.

9.4. Step 4: Identify the site boundaries

The boundaries of the study area are the site boundaries show within Appendix A. The study is temporally limited to the day of sampling, that is, 24 April 2024.

9.5. Step 5: Develop a decision rule

The assessment includes a comparison of individual soil sample results to the Residential A Health Investigation Levels, calculated Ecological Investigation Levelss and Management Limits detailed within Schedule B1 of *NEPC National Environmental Protection (Assessment of Site Contamination) Measure* [3]. The assessment criteria are outlined and justified in Section 12.

9.6. Step 6: Specify limits on decision errors

Two types of decision errors may occur due to uncertainties or limitations in the project data set:

- A site is deemed uncontaminated when, in fact, it is contaminated,
- A site is deemed contaminated when, in fact, it is uncontaminated.

The consequences for incorrectly assessing a site as posing an unacceptable risk are considered less significant than the consequences for incorrectly assessing a site as posing acceptable risk.

Factors that may contribute to one of the above decision errors include:

- Sampling error – the sampling program does not adequately detect the variability of a contaminant from point to point across the site. That is, the samples collected are not representative of the site conditions,
- Measurement error – may occur through the sample collection, handling, preparation, analysis, and data reduction processes.

The combination of the above errors is known as 'total study error' and is minimised through the correct choice of sampling design and measurement systems.

CSTS has adopted an acceptable error rate of 5% for false negative results. CSTS has defined a false negative result as classifying the site uncontaminated when, in fact, it is contaminated. This acceptable rate of error is derived to provide a 95% level of confidence, accounting for potential errors and limitations that may arise.

CSTS has adopted an acceptable error rate of 5% for false positive results. CSTS has defined a false positive result as classifying the site contaminated when, in fact, it is uncontaminated. This acceptable rate of error is derived to provide a 95% level of confidence, accounting for potential errors and limitations that may arise.

9.7. Optimise the design

In order to optimise the design, a soil sampling plan was implemented as outlined within Section 10. Quality assurance and quality control procedures were implemented as outlined within Section 11.

10. Sampling Process

As this investigation is preliminary, sampling locations were assessed at reduced rate of the recommended minimum rate within the *NSW EPA Sampling Design Part 1 – Application* [4]. Soil samples were recovered from the near-surface profiles. Twenty (20) boreholes were excavated in accessible areas to provide spatial coverage of the site, with a sample recovered from each borehole.

The boreholes were excavated using a mounted drill auger to depths of between 0.15m and 0.4m bgl. Samples were recovered from material held within the auger at surface 0-150mm profiles, taking care to ensure sampled material was not in direct contact with the auger head. Each sample was recovered using a pair of nitrile gloves to transfer a portion of the material

into a laboratory supplied 250mL glass jar with Teflon seal lid. A replicate sample was recovered in the same manner into a food-grade 'snap-lock' bag for the analysis of Asbestos. Each sample was sealed and labelled with the project code and sample ID before being transferred into a chilled container to begin the cool down process as required prior to the chemical analysis of the soil.

When the samples had been recovered, the boreholes were refilled with the excavated material in accordance with Work Health and Safety requirements. The chilled container was sealed and transported to Eurofins Pty Ltd under stringent chain or custody procedures. Upon receipt of the samples, the laboratory checked the samples to confirm their condition, including the integrity of the sample jar seals. When satisfied, the laboratory returned a sample receipt. Laboratory documentation is located within Appendix D.

11. Quality Assurance & Quality Control

11.1. Field quality measures

Site works were conducted by an experienced Environmental Consultant on 24 April 2024 in accordance with the *CSTS Field Operating Manual* [5] on Standard Operating Procedures for Environmental Sampling and Monitoring. This includes but is not limited to; the methods of sampling, decontamination of sampling equipment, sample preparation and storage, the documentation of site conditions, and the completion of chain of custody documentation.

Duplicate samples were recovered to analyse the precision and reproducibility of the conducted analysis. The duplicate samples were labelled with an identification number not known to the laboratory, and analysed in the same way as the primary samples. Duplicate samples are analysed by calculating the relative percentage difference [RPD] of the laboratory results for the duplicate and corresponding primary sample. The RPD is a method of normalising two values and allows a comparison between values.

Upon determination of the RPDs, no RPDs were found to exceed 50% in either of the two samples indicating a high level of laboratory and sampling accuracy. Refer to **Table 4 and 5.**

11.2. Laboratory quality assessment

Eurofins Pty Ltd is accredited by NATA (NATA accreditation number 1261) for chemical testing services. Eurofins Pty Ltd has a quality system compliant to ISO/IEC 17025 and work to documented procedures in accordance with this standard. This includes but is not limited to; participation in proficiency testing, use of certified reference materials and statistical analysis of quality control data.

Quality control samples are included in the laboratory's testing schedules at or above frequencies stipulated within the *NEPC National Environmental Protection (Assessment of Site Contamination) Measure* [3], and in accordance with their NATA accreditation. These include the use of calibration standards, calibration verification standards, method blanks, matrix spikes and duplicates, laboratory control samples, surrogates and internal standards.

Table 3: Relative Percent Differences

Analyte	LOR (mg/kg)	Concentrations		RPD (%)
		BH8	BH8A	
Arsenic	2	**4.2**	**4.7**	**11.2**
Cadmium	0.4	< 0.4	< 0.4	0
Chromium	5	**40**	**32**	**22.2**
Copper	5	**18**	**18**	0
Lead	5	**8.5**	**8.9**	**4.6**
Mercury	0.1	< 0.1	< 0.1	0
Nickel	5	**40**	**33**	**19.2**
Zinc	5	**36**	**43**	**17.2**
Total PAH	0.5	<0.5	<0.5	0
B(a)P TEQ	0.5	<0.5	<0.5	0
Benzene	0.1	<0.1	<0.1	0
Toluene	0.1	<0.1	<0.1	0
Ethyl-benzene	0.1	<0.1	<0.1	0
Xylene	0.3	<0.3	<0.3	0
TRH F1	25	<25	<25	0
TRH F2	50	<50	<50	0
TRH F3	50	<50	<50	0
TRH F4	100	<100	<100	0

Table 5: Relative Percent Differences

Analyte	LOR (mg/kg)	Concentrations		RPD (%)
		BH17	BH17A	
Arsenic	2	**2.3**	**3.4**	**38.6**
Cadmium	0.4	< 0.4	< 0.4	0
Chromium	5	**49**	**67**	**31.0**
Copper	5	**14**	**18**	**25**
Lead	5	< 5	6.2	**21.4**
Mercury	0.1	< 0.1	< 0.1	0
Nickel	5	**41**	**55**	**19.2**
Zinc	5	**12**	**16**	**29.2**
Total PAH	0.5	<0.5	<0.5	0
B(a)P TEQ	0.5	<0.5	<0.5	0
Benzene	0.1	<0.1	<0.1	0
Toluene	0.1	<0.1	<0.1	0
Ethyl-benzene	0.1	<0.1	<0.1	0
Xylene	0.3	<0.3	<0.3	0
TRH F1	25	<25	<25	0
TRH F2	50	<50	<50	0
TRH F3	50	<50	<50	0
TRH F4	100	<100	<100	0

11.3. Data Evaluation

Data Quality Indicators [DQI] are used to document and quantify compliance, or otherwise with the requirements of the Data Quality Objectives [DQO]. They are used to assess the reliability of the field procedures and analytical results. Refer to **Table 6**.

Table 6: Data Quality Indicators

DQI	Consideration		Compliance
Completeness[1]	Field	All critical locations sampled	A total of twenty - two (22) samples were collected from twenty (20) boreholes excavated within the site. As this was a preliminary assessment, this is considered adequate.
		All samples collected (from grid and at depth)	All samples were collected in accordance with the sampling plan
		SOPs appropriate and complied with	All samples were collected in accordance with relevant guidelines, industry practices, and Australian Standards
		Experienced sampler	Samples were recovered by a suitably qualified and experienced sampler
		Documentation correct	All required documentation was completed including written site records and photographic logs
	Laboratory	All critical samples analysed according to SAQP	All of the recovered samples were analysed by a NATA accredited laboratory
		All analytes analysed according to SAQP	Each recovered sample was analysed for the analytes required by the SAQPs in accordance with the context for which the sample was recovered
		Appropriate methods and LORs	Eurofins Pty Ltd is a suitably qualified NATA accredited laboratory, therefore the appropriate methods and LORs were adopted for the testing, as outlined within the analytical reports
		Sample documentation complete	Appropriate chain of custody documentation was completed. A sample receipt was provided detailing the condition of the samples upon receipt
		Sample holding times complied with	All samples were analysed within the appropriate holding times as detailed in *NEPM 2013*
Comparability[2]	Field	Same SOPs used on each occasion	Each sample was recovered in accordance with the SOPs
		Experienced sampler	Samples were recovered by a suitably qualified and experienced sampler
		Climatic conditions	The samples were collected over a period of less than two (2) hours, therefore the climatic conditions are deemed to have a negligible impact on the comparability of the samples.
		Same types of samples collected	The type of samples collected was consistent
	Laboratory	Sample analytical methods used	Eurofins Pty Ltd is a suitably qualified NATA accredited laboratory, therefore the appropriate methods were adopted for the testing, as outlined within the analytical reports
		Sample LORs	Eurofins Pty Ltd is a suitably qualified NATA accredited laboratory, therefore the appropriate LORs were adopted for the testing, as outlined within the analytical reports
		Same laboratories	Eurofins Pty Ltd conducted all of the analytical

DQI	Consideration		Compliance
			testing
		Same units	The same units were used for the respective analytes
Representativeness[3]	Field	Appropriate media sampled according to SAQP	The SAQP was limited to soil condition investigation. All samples were recovered in accordance with the SAQP
		All media identified in SAQP	The sampling investigation was limited to the analysis of the soil
	Laboratory	All samples analysed according to SAQP	Eurofins Pty Ltd is a suitably qualified NATA accredited laboratory, therefore all samples were analysed in accordance with the appropriate requirements
Precision[4]	Field	SOPs appropriate and complied with	All samples were recovered in accordance with the SOPs
	Laboratory	Laboratory and inter-laboratory duplicates	Laboratory and inter-laboratory duplicates are analysed as a component of the standard operating procedures of Eurofins Pty Ltd in accordance with the conditions of their NATA accreditation
		Field duplicates	Field duplicate samples were recovered at a rate of 10% and labelled with sample IDs not known to the laboratories, and were analysed along with the primary samples by Eurofins Pty Ltd as detailed within Section 11
		Laboratory-prepared volatile trip spikes	A laboratory-prepared volatile trip spike was beyond the scope of investigation
Accuracy[5]	Field	SOPs appropriate and complied with	All samples were recovered in accordance with the SOPs
	Laboratory	Analysis of field blanks, rinsate blanks, reagent blanks, method blanks, matrix spikes, matrix spike duplicates, surrogate spikes, reference materials, laboratory control samples, and laboratory-prepared spikes	Laboratory quality assurance and quality control samples were analysed by Eurofins Pty Ltd, as summarised in Section 11 and detailed within the analytical reports. Field blanks and spikes were beyond the scope of investigation.

12. Assessment Criteria

As the site is to be developed into residential land with soil access, CSTS considers the appropriate Health Investigation Level (HIL) to be HIL 'A'; Standard residential with garden/accessible soil (home grown produce). The soil Health Screening Levels (HSLs) for vapour intrusion used are the HSL-As for low density residential sites. Ecological Investigation Levels have been derived from the 'Urban residential and public open space' for aged contamination and Management Limits have been derived from 'Residential, parkland and public open space'. The results of the laboratory analysis have been compared to the Residential A Health Investigation Levels/Health Screening Levels, Ecological Investigation Levels and Management Limits detailed within the *NEPC National Environmental Protection (Assessment of Site Contamination) Measure* [3]. Provided the detected concentrations do not

exceed these levels, the site can be considered suitable for residential land use with soil access from a health and ecological risk perspective.

Table 7: Assessment Criteria (mg/kg)

Analyte	Residential A Health Investigation/Screening Levels	ESLs/EILS	Management Limits
Arsenic	100	100	-
Cadmium	20	-	-
Chromium	100	390	-
Copper	7000	250	-
Lead	300	1100	-
Mercury	200	-	-
Nickel	1,200	480	-
Zinc	8000	1400	-
PAH	300	-	-
B(a)P	-	1.4	-
B(a)P TEQ[1]	3	-	-
Benzene	0.7	50	-
Toluene	460	85	-
Ethyl-benzene	NL	125	-
Xylene	110	45	-
Naphthalene	5	170	-
TRH F1	60[2]	180[4]	800
TRH F2	330[2]	120[5]	1000
TRH F3	NL[2]	1300	2500
TRH F4	NL[2]	5600	1000
DDT + DDE + DDD	600	180[6]	-
Aldrin + Dieldrin	6	-	-
Chlordane	50	-	-
Endosulfan	270	-	-
Endrin	10	-	-
Heptachlor	6	-	-
HCB	10	-	-
Methoxychlor	300	-	-
Chlorpyrifos	160	-	-
PCB	1	-	-
Asbestos	No Detection	-	-

Adapted from Schedule B(1) of *NEPC National Environmental Protection (Assessment of Site Contamination) Measure* [3] *. NL = Not Limiting.*

Notes:

1. Calculated by multiplying the concentration of each carcinogenic PAH in the sample by its potency relative to B(a)P and summing these products.
2. Investigation level for vapour intrusion, clay 0m to <1m
3. No quantitative analysis was conducted for Asbestos, therefore a criterion of 'No Detection' has been Adopted.
4. Value includes BTEX
5. Value includes Naphthalene
6. Value for DDT only

13. Results

The laboratory analysis of the recovered samples was undertaken by experienced technicians from Eurofins Pty Ltd in accordance with relevant Australian Standards and the conditions of their NATA accreditation.

The laboratory analysis detected Arsenic, Chromium, Copper, Lead, Mercury, Nickel, Zinc, TRH(F3), TRH(F4), Aldrin + dieldrin within the recovered samples. No concentrations were found to exceed the adopted assessment criteria.

No concentrations of BTEX, TRH (F1, F2), PAH compounds, OPP, PCB or Asbestos were detected above the laboratory limits of reporting within any of the recovered samples. Refer to **Tables 8 & 9**.

Table 8: Laboratory Results (mg/kg)

Sample ID	Priority Metals								Polycyclic Aromatic Hydrocarbons			BTEX			
	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAH	B(a)P	B(a)P TEQ	Benzene	Toluene	Ethyl-benzene	Xylene
BH1	**6.6**	< 0.4	**23**	**14**	**8.7**	< 0.1	**17**	**25**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH2	**4.2**	< 0.4	**70**	**26**	**7.8**	< 0.1	**72**	**49**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH3	**6.8**	< 0.4	**43**	**18**	**9.8**	< 0.1	**39**	**46**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH4	**6.7**	< 0.4	**42**	**24**	**12**	< 0.1	**33**	**71**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH5	**3.8**	< 0.4	**41**	**21**	**16**	< 0.1	**32**	**66**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH6	< 2	< 0.4	**36**	**13**	**5.7**	< 0.1	**21**	**19**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH7	**4.3**	< 0.4	**33**	**18**	**27**	< 0.1	**30**	**77**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH8	**4.7**	< 0.4	**32**	**18**	**8.9**	< 0.1	**33**	**43**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH9	**4.6**	< 0.4	**39**	**17**	**8.2**	< 0.1	**38**	**40**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH10	**2.3**	< 0.4	**58**	**20**	**5.4**	< 0.1	**70**	**22**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH11	**2.9**	< 0.4	**62**	**18**	**5.7**	< 0.1	**51**	**21**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH12	**2.3**	< 0.4	**58**	**19**	< 5	< 0.1	**49**	**22**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH13	< 2	< 0.4	**66**	**19**	**13**	< 0.1	**37**	**53**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH14	**10**	< 0.4	**12**	**11**	**19**	< 0.1	**7.1**	**17**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH15	**3.5**	< 0.4	**75**	**24**	**5.6**	< 0.1	**90**	**24**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH16	**4**	< 0.4	**58**	**18**	**14**	< 0.1	**37**	**57**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH17	**3.4**	< 0.4	**67**	**18**	**6.2**	< 0.1	**55**	**16**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH18	**5.2**	< 0.4	**66**	**23**	**18**	< 0.1	**44**	**99**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH19	**4.3**	< 0.4	**64**	**20**	**9**	< 0.1	**53**	**29**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
BH20	**3.3**	< 0.4	**44**	**19**	**6.9**	< 0.1	**39**	**33**	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.3
HIL-A/HSL-A	**100**	**20**	**100**	**7000**	**300**	**200**	**1,200**	**8000**	**300**	**-**	**3**	**0.7**	**460**	**NL**	**110**
EIL/ESL	**100**	**-**	**390**	**250**	**1100**	**-**	**480**	**1400**	**-**	**1.4**	**-**	**50**	**85**	**125**	**45**

Adapted from Eurofins Analytical Report 1091202 and the NEPC National Environmental Protection (Assessment of Site Contamination) Measure [3].
Exceedance of adopted criteria shaded.

Table 9: Laboratory Results (mg/kg)

Sample ID	Total Recoverable Hydrocarbons				Organochlorine Pesticides								Organophosphorus Pesticides	PCB	Asbestos
	TRH F1	TRH F2	TRH F3	TRH F4	DDT + DDE + DDD	Aldrin + Dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Chlorpyrifos	PCB	Asbestos
BH1	< 20	< 50	**110**	**160**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH2	< 20	< 50	**170**	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH3	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH4	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH5	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH6	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH7	< 20	< 50	< 100	< 100	<0.5	**1.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH8	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH9	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH10	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH11	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH12	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH13	< 20	< 50	**470**	**110**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH14	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH15	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH16	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH17	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH18	< 20	< 50	**120**	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH19	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
BH20	< 20	< 50	< 100	< 100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	ND
HIL-A/HSL-A	**60**	**330**	**NL**	**NL**	**600**	**6**	**50**	**270**	**10**	**6**	**10**	**300**	**160**	**1**	**No Detection**
EIL/ESL	-	-	-	-	**180**	-	-	-	-	-	-	-	-	-	-
Management Limits	**800**	**1000**	**2500**	**1000**	-	-	-	-	-	-	-	-	-	-	-

Adapted from *Eurofins Analytical Report 1091202* and the *NEPC National Environmental Protection (Assessment of Site Contamination) Measure* [3]. ND = No Detection Detection

14. Site Characterisation

The back area of the site has historically been a cleared area of grassland that may have been used for some agricultural purpose prior to the 60s. Illegal dumping appears to have occurred in the area, beginning sometime in the 2010s. At the time of investigation, the back of the site generally consisted of an overgrown grassed area with weeds, shrubs and trees. The area was approximately 20,000m^2 and sloped down to the northwest. The area was bordered by residential properties to the east and southeast. The area was bordered to the west by a row of tress then a railway line running parallel to the New England Highway just beyond it. To the southwest of the area was a car workshop shed with an approximate area of 1200m^2.

At the time of investigation, there was rubbish that had been dumped in this area. The rubbish in the back area consisted of bricks, timber, wood, hardboard, metal sheeting, ceramic tiles and plastic items (wheelie bin, a pram, and chairs). During the inspection, no indicators of significant contamination, such as the staining or discolouration of sub-surface material, or the emission of odours, was observed. The soil in the area consisted of fill material from an unknown origin.

The middle focus area of the site was generally consisted of a grass field area containing an amenities block, toilet block, four (4) cottages and a plant room. All of these buildings were constructed with brick. Non-friable ACM had been identified in all of these buildings in the Hazmat Services 2023 ACM survey; however, these buildings were generally in good condition and no ACM was found at the time of investigation. Historically, the area had been used as area for low density residential housing since at least the 1950s.

The area is bound by a road to the north by the shed area subject to report SII 5183 – AB, residential properties to the east, Hunter Street to the south and Hunter Street to the west with the heritage listed milk factory just beyond the road.

During the visual inspection, no indicators of significant contamination, such as the staining or discolouration of sub-surface material, or the emission of odours, were observed in this area. No ACM was found at the time of investigation. The only foreign materials observed were occasional pieces household plastic rubbish.

The front area was focus area of the site was consisted of an approximately 8200m^2 overgrown grass field with an old building on the southern section. The area is bordered by the entrance to the factory to the north/northeast, Hunter Street to the east, a row of tress then a railway line to the west and an empty grassed lot to the south.

During the visual inspection, no indicators of significant contamination, such as the staining or discolouration of sub-surface material, or the emission of odours, were observed in this area. No ACM or foreign materials were found at the time of investigation.

The western side of the site has been occupied by a heritage listed milk factory which appears to have been present since 1953 according to the NSW Heritage Inventory [13] . The factory has been listed as a heritage item in the Muswellbrook Local Environmental Plan 2009. Information from the client has revealed the old factory will not be affected by the proposed development.

Twenty (22) samples were taken in total with two (2) duplicates. The samples were compared against HIL-A, EILs and Management Limits as detailed in section 12. The laboratory

analysis detected Arsenic, Chromium, Copper, Lead, Mercury, Nickel, Zinc, TRH(F3), TRH(F4), Aldrin + dieldrin within the recovered samples. No concentrations were found to exceed the adopted assessment criteria.

No concentrations of BTEX, TRH (F1, F2), PAH compounds, OPP, PCB or Asbestos were detected above the laboratory limits of reporting within any of the recovered samples.

15. Conclusions & Recommendations

Based on the conducted assessment, CSTS has concluded that the site known as 1 Hunter Street, Muswellbrook NSW 2333, excluding the area subject to SII 5178 – AB, can be made suitable, from a contamination perspective, for residential land use with soil access opportunities, providing the following recommendations are implemented.

- If any demolition of existing structures is to be undertaken it should be conducted in accordance with the recommendations of the asbestos-containing materials survey conducted by Hazmat Services Pty Ltd in 2023.
- The site is generally made clean from anthropogenic deposits such as the rubbish in the back area of the site.

CSTS recommends that, during the process of development, should any indicators of potential contamination be encountered, this office is to be contacted immediately for further assessment. Should there be any change in the proposed development, all conclusions and recommendations are to be reviewed. Specifically, if the proposed development will involve an alternate final land use, the findings of this report will require revision and further assessment may be necessary.

16. Limitations

This report pertains to the site known as 1 Hunter Street, Muswellbrook NSW 2333 at the time of the visual assessment and sample recovery. Should there be any variations in the site conditions since the abovementioned date (such as the importation of fill, chemical spillage, illegal dumping etc.), further assessment will be required. Should any suspect material be encountered, we recommend that this office be contacted immediately for further assessment. Neither Compaction & Soil Testing Services Pty Ltd, nor any other reputable firm can give unqualified warranties on the condition of the site and subsurface conditions.

While Compaction & Soil Testing Services Pty Ltd takes all reasonable due care and diligence, we offer no absolute warranty for the material below or between the locations sampled and investigated. Unless otherwise stated, Compaction & Soil Testing Services Pty Ltd has made no effort to verify the validity of the information gathered from external sources, and assumes it provides a reliable foundation for the assessment. Compaction & Soil Testing Services Pty Ltd does not assume any liability for site conditions unobserved or inaccessible at the time of the investigation.

This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose. If there is any change in the proposed development described within this report, then all recommendations are to be reviewed. No other warranty, expressed or implied, is made or intended. Copyright of this report remains the property of Compaction & Soil Testing Services Pty Ltd.

Subject to the payment of all fees due for the investigation, the client alone shall have licence to use this report. This report shall not be reproduced except in full.

Should you have any queries about the methodology, findings, conclusions or recommendations of this Stage 1 Preliminary Site Investigation, please do not hesitate to contact our office on (02) 9675 7522.

17. References

[1] – New South Wales Environmental Protection Authority 2020, *Contaminated Lands Guidelines; Consultants reporting on contaminated land*, NSW EPA, Parramatta NSW Australia

[2] – New South Wales State Government 1997, *Contaminated Land Management Act 1997*, NSW State Government, Sydney NSW Australia.

[3] – National Environmental Protection Council 2013, *National Environment Protection (Assessment of Site Contamination) Measure 1999*, Australian Federal Government, Canberra ACT Australia

[4] – New South Wales Environmental Protection Agency 2022, *Sampling Design Part 1 – Application*, NSW EPA, Parramatta NSW Australia

[5] – Compaction & Soil Testing Services Pty Ltd, 2014, *Field Manual on Standard Operating Procedures for Environmental Sampling and Monitoring*

[6] – Nearmap Aerial Imagery, part of Nearmap Australia Pty Ltd, Barangaroo NSW Australia

[7] – New South Wales Department of Planning and Environment, *eSPADE Tool*, accessed 24/05/2024 via https://www.environment.nsw.gov.au/eSpade2WebApp

[8] – New South Wales Department of Planning and Environment, *Naturally Occurring Asbestos in NSW,* accessed 24/05/2024 via https://trade.maps.arcgis.com/apps/PublicInformation/index.html?appid=87434b6ec7dd4aba8cb664d8e646fb06

[9] - *Asbestos Containing Material report (N5294-ACM-R1-191023)*, Hazmat Services Pty Ltd, Carrington NSW 2294

[10] – New South Wales Spatial Services Department of Customer Service, *Historical, aerial and satellite imagery NSW* accessed 24/05/2024 via https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery (Accessed: 07 May 2024).

[11] - New South Wales State Government, *NSW Planning Portal Spatial Viewer* accessed 24/05/2024 via https://www.planningportal.nsw.gov.au/spatialviewer/#/find-a-property/address.

[12] – Australian Government, Bureau of Meteorology, *Australian Groundwater Explorer* accessed 24/05/2024 via http://www.bom.gov.au/water/groundwater/explorer/map.shtml

[13] - New South Wales State Government, NSW Environment and Heritage, *NSW State Heritage Inventory* accessed 24/05/2024 via https://www.hms.heritage.nsw.gov.au/App/Item/SearchHeritageItems?_ga=2.165972984.714120821.1658117920-344545924.1656901875.

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Appendix A - Drawings

Compaction & Soil Testing Services Pty Ltd

Drawn:	KD	**Site Drawing** Site drawing for the material of interest located at 1 Hunter Street, NSW 2333 Approximate GPS Coordinates of (GDA94): -32.250830, 150.894650. Source: Nearmap, dated 6 March 2024	Drawing No:	AA 001
Approved:	KD		Project Code	
Date:	24/05/2024		SII 5183 - AA	

Compaction & Soil Testing Services Pty Ltd

Drawn:	KD	**Sampling Plan** Site drawing for the material of interest located at 1 Hunter Street, NSW 2333 Approximate GPS Coordinates of (GDA94): -32.250830, 150.894650. Source: Nearmap, , dated 6 March 2024	Drawing No:	AA 001
Approved:	KD		Project Code	
Date:	24/05/2024		KTT 5184 - AA	

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Appendix B:

Photographs

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Photograph 1 – Overview of the back area looking to the north east. Located at 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): -32.249133, 150.896514.

Photograph 2 – Pile of bricks at the back area of site. Located at 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): -32.249133, 150.896514.

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Photograph 3 – Wood and scrap metal at the back area of site. Located at 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): -32.249133, 150.896514.

Photograph 4 – Overview of the back area looking to the south west. Located at 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): -32.249133, 150.896514.

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Photograph 5 – Overview of bore hole 2 (BH2) with the material of interest pictured. Located at the back area of 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): -32.249133, 150.896514.

Photograph 6 - Overview of the middle area of the site looking south. Located at the back area of 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): -32.252001, 150.89365..

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Photograph 7 - Overview of bore hole 9 (BH9) with the material of interest pictured. Located at the back area of 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): -32.252001, 150.89365.

Photograph 8 - Overview of the middle area of the site looking south Located at the back area of 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): - -32.252001, 150.89365.

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Photograph 9 - Overview of the front area of the site looking to the north west. Located at the back area of 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): - -32.252001, 150.89365.

Photograph 10 - Overview of the front area of the site looking to the north west. Located at the back area of 1 Hunter Street, Muswellbrook NSW 2333 (Lot1 of DP995228). Approximate GPS Coordinates of (GDA94): - -32.252001, 150.89365.

C.S.T.S.
Compaction & Soil Testing Services Pty Ltd
1/78 Owen Street, GLENDENNING NSW 2761 • ABN 44 106 976 738
Phone: 02 9675 7522 Fax: 02 9675 7544
Email: office@csts.net.au Web: www.csts.net.au

Appendix C:

Laboratory Results

eurofins | mgt

☑ **Sydney**
Unit F3 - 6 Building F, 16 Mars Road, Lane Cove
Phone: +612 9900 8400
Email: EnviroSampleNSW@eurofins.com.au

☐ **Brisbane**
Unit 1-21 Smallwood Place, Murrarie
Phone: +617 3902 4600
Email: EnviroSampleQLD@eurofins.com.au

☐ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name :	CSTS	Contact Name:	Karl@csts.net.au	Purchase Order:	invoice@csts.net.au
Office Address :	1/78 Owen Street,	Project Manager :	Shanan Mcmanus	Project Number:	SII 5183
	Glendenning NSW 2761	Email for results :	Karl@csts.net.au	Project Name:	Hunter Street - Muswellbrook

COC Number :

Eurofins | mgt quote ID : 190822CSTS

Data output format:

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	Moisture	B7A	B15	Asbestos ID	ASS Field	ASS Detailed	L2	EC	RAC	Containers:	Sample comments:
1	BH1	23/04/2024	S		x	x	x						Jar, Zip lock bag	
2	BH2	23/04/2024	S		x	x	x						Jar, Zip lock bag	
3	BH3	23/04/2024	S		x	x	x						Jar, Zip lock bag	
4	BH4	23/04/2024	S		x	x	x						Jar, Zip lock bag	
5	BH5	23/04/2024	S		x	x	x						Jar, Zip lock bag	
6	BH6	23/04/2024	S		x	x	x						Jar, Zip lock bag	
7	BH7	23/04/2024	S		x	x	x						Jar, Zip lock bag	
8	BH8	23/04/2024	S		x	x	x						Jar, Zip lock bag	
9	BH9	23/04/2024	S		x	x	x						Jar, Zip lock bag	
10	BH10	23/04/2024	S		x	x	x						Jar, Zip lock bag	
11	BH11	23/04/2024	S		x	x	x						Jar, Zip lock bag	
12	BH12	23/04/2024	S		x	x	x						Jar, Zip lock bag	
13	BH13	23/04/2024	S		x	x	x						Jar, Zip lock bag	
14	BH14	23/04/2024	S		x	x	x						Jar, Zip lock bag	
15	BH15	23/04/2024	S		x	x	x						Jar, Zip lock bag	
16	BH16	23/04/2024	S		x	x	x						Jar, Zip lock bag	
17	BH17	23/04/2024	S		x	x	x						Jar, Zip lock bag	
18	BH18	23/04/2024	S		x	x	x						Jar, Zip lock bag	
19	BH19	23/04/2024	S		x	x	x						Jar, Zip lock bag	
20	BH20	23/04/2024	S		x	x	x						Jar, Zip lock bag	
21	BH17A	23/04/2024	S		x	x							Jar	
22	BH8A	23/04/2024	S		x	x							Jar	
23														
24														
25														

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers: 1LP | 250P | 125P | 60ml plastic | 40mL vial | 200ml glass | Jar | Zip lock bag

Relinquished By:	K.D	Laboratory Staff	Received By:	Turn around time	Method Of Shipment	Temperature on arrival:
Date & Time::	24/04/24		Date & Time: 24/4/24 11:03	1 DAY ☐ 2 DAY ☐ 3 DAY ☐	☐ Courier	16.3
Signature:			Signature:	5 DAY ☑ 10 DAY ☐	☑ Hand Delivered	Report number:
					☐ Postal	1091202
					Courier Consignment # :	

Compaction & Soil Testing
1/78 Owen St
Glendenning
NSW 2761

Attention: **Karl Davis**

Report **1091202-S**
Project name HUNTER STREET - MUSWELLBROOK
Project ID SII 5183
Received Date Apr 24, 2024

Client Sample ID			[G01]**BH1**	[G01]**BH2**	[G01]**BH3**	[G01]**BH4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-Ap0067386**	**S24-Ap0067387**	**S24-Ap0067388**	**S24-Ap0067389**
Date Sampled			**Apr 23, 2024**	**Apr 23, 2024**	**Apr 23, 2024**	**Apr 23, 2024**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	52	120	< 50	< 50
TRH C29-C36	50	mg/kg	100	70	< 50	69
TRH C10-C36 (Total)	50	mg/kg	152	190	< 50	69
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	110	170	< 100	< 100
TRH >C34-C40	100	mg/kg	160	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	270	170	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	97	88	111	108
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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

Client Sample ID			G01 BH1	G01 BH2	G01 BH3	G01 BH4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067386	S24-Ap0067387	S24-Ap0067388	S24-Ap0067389
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	70	58	70	84
p-Terphenyl-d14 (surr.)	1	%	82	80	83	109
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 1	< 1	< 1	< 1
4.4'-DDD	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDT	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-HCH	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
b-HCH	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
d-HCH	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
g-HCH (Lindane)	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobenzene	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methoxychlor	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toxaphene	0.5	mg/kg	< 10	< 10	< 10	< 10
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 1	< 1	< 1	< 1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	90	95	63	135
Tetrachloro-m-xylene (surr.)	1	%	82	76	81	103
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bolstar	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorfenvinphos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorpyrifos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorpyrifos-methyl	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Coumaphos	2	mg/kg	< 5	< 5	< 5	< 5
Demeton-S	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Demeton-O	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diazinon	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorvos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			G01 BH1	G01 BH2	G01 BH3	G01 BH4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067386	S24-Ap0067387	S24-Ap0067388	S24-Ap0067389
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
EPN	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethoprop	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethyl parathion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fenitrothion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fensulfothion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fenthion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Malathion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Merphos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Methyl parathion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Mevinphos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Monocrotophos	2	mg/kg	< 5	< 5	< 5	< 5
Naled	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Omethoate	2	mg/kg	< 5	< 5	< 5	< 5
Phorate	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pirimiphos-methyl	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrazophos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ronnel	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Terbufos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachlorvinphos	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tokuthion	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloronate	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Triphenylphosphate (surr.)	1	%	85	74	86	92
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 1	< 1	< 1	< 1
Aroclor-1221	0.1	mg/kg	< 1	< 1	< 1	< 1
Aroclor-1232	0.1	mg/kg	< 1	< 1	< 1	< 1
Aroclor-1242	0.1	mg/kg	< 1	< 1	< 1	< 1
Aroclor-1248	0.1	mg/kg	< 1	< 1	< 1	< 1
Aroclor-1254	0.1	mg/kg	< 1	< 1	< 1	< 1
Aroclor-1260	0.1	mg/kg	< 1	< 1	< 1	< 1
Total PCB*	0.1	mg/kg	< 1	< 1	< 1	< 1
Dibutylchlorendate (surr.)	1	%	90	95	63	135
Tetrachloro-m-xylene (surr.)	1	%	82	76	81	103
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			[G01]BH1	[G01]BH2	[G01]BH3	[G01]BH4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067386	S24-Ap0067387	S24-Ap0067388	S24-Ap0067389
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 1	< 1	< 1	< 1
Total cresols*	0.5	mg/kg	< 1	< 1	< 1	< 1
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 2	< 2	< 2	< 2
Phenol-d6 (surr.)	1	%	70	INT	78	83
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Arsenic	2	mg/kg	6.6	4.2	6.8	6.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	23	70	43	42
Copper	5	mg/kg	14	26	18	24
Lead	5	mg/kg	8.7	7.8	9.8	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	72	39	33
Zinc	5	mg/kg	25	49	46	71
Sample Properties						
% Moisture	1	%	13	18	17	33

Client Sample ID			BH5	BH6	[G01]BH7	BH8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067390	S24-Ap0067391	S24-Ap0067392	S24-Ap0067393
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			BH5	BH6	[G01]BH7	BH8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067390	S24-Ap0067391	S24-Ap0067392	S24-Ap0067393
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	78	92	101	120
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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	%	61	70	70	68
p-Terphenyl-d14 (surr.)	1	%	63	69	75	67
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	1.2	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05

Client Sample ID			BH5	BH6	[G01]BH7	BH8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067390	S24-Ap0067391	S24-Ap0067392	S24-Ap0067393
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 10	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	1.2	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.5	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	1.2	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Dibutylchlorendate (surr.)	1	%	68	93	89	87
Tetrachloro-m-xylene (surr.)	1	%	69	71	81	68
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 5	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 5	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 5	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
Triphenylphosphate (surr.)	1	%	66	79	86	74

Client Sample ID			BH5	BH6	[G01]BH7	BH8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067390	S24-Ap0067391	S24-Ap0067392	S24-Ap0067393
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 1	< 0.1
Dibutylchlorendate (surr.)	1	%	68	93	89	87
Tetrachloro-m-xylene (surr.)	1	%	69	71	81	68
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.5	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 1	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 1	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 2	< 0.5
Phenol-d6 (surr.)	1	%	57	63	59	59
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Arsenic	2	mg/kg	3.8	< 2	4.3	4.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	41	36	33	32
Copper	5	mg/kg	21	13	18	18
Lead	5	mg/kg	16	5.7	27	8.9
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	32	21	30	33
Zinc	5	mg/kg	66	19	77	43
Sample Properties						
% Moisture	1	%	21	22	16	16

Client Sample ID			BH9	BH10	BH11	BH12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067394	S24-Ap0067395	S24-Ap0067396	S24-Ap0067397
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	96	104	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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	%	83	71	71	70
p-Terphenyl-d14 (surr.)	1	%	84	68	69	68

Client Sample ID			BH9	BH10	BH11	BH12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067394	S24-Ap0067395	S24-Ap0067396	S24-Ap0067397
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
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-HCH	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-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	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-HCH (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	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	86	91	89	90
Tetrachloro-m-xylene (surr.)	1	%	86	71	73	71
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			BH9	BH10	BH11	BH12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067394	S24-Ap0067395	S24-Ap0067396	S24-Ap0067397
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	91	76	77	78
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	86	91	89	90
Tetrachloro-m-xylene (surr.)	1	%	86	71	73	71
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	62	59	61	62
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			BH9	BH10	BH11	BH12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067394	S24-Ap0067395	S24-Ap0067396	S24-Ap0067397
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	4.6	2.3	2.9	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	39	58	62	58
Copper	5	mg/kg	17	20	18	19
Lead	5	mg/kg	8.2	5.4	5.7	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	38	70	51	49
Zinc	5	mg/kg	40	22	21	22
Sample Properties						
% Moisture	1	%	19	20	24	23

Client Sample ID			[G01] BH13	[G01] BH14	BH15	BH16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067398	S24-Ap0067399	S24-Ap0067400	S24-Ap0067401
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	230	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	290	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	520	< 50	< 50	< 50
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	470	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	110	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	580	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	91	118	88	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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

Client Sample ID			[G01]BH13	[G01]BH14	BH15	BH16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067398	S24-Ap0067399	S24-Ap0067400	S24-Ap0067401
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	80	69	70	71
p-Terphenyl-d14 (surr.)	1	%	89	82	66	67
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 10	< 10	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.5	< 0.5	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	69	88	90	85
Tetrachloro-m-xylene (surr.)	1	%	82	78	70	71
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2

Client Sample ID			[G01]BH13	[G01]BH14	BH15	BH16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067398	S24-Ap0067399	S24-Ap0067400	S24-Ap0067401
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Coumaphos	2	mg/kg	< 5	< 5	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 5	< 5	< 2	< 2
Naled	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Omethoate	2	mg/kg	< 5	< 5	< 2	< 2
Phorate	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	84	78	75	75
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 1	< 1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	69	88	90	85
Tetrachloro-m-xylene (surr.)	1	%	82	78	70	71
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

Client Sample ID			[G01]BH13	[G01]BH14	BH15	BH16
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067398	S24-Ap0067399	S24-Ap0067400	S24-Ap0067401
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.5	< 0.5	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 1	< 1	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 1	< 1	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 2	< 2	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	63	69	61	60
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Arsenic	2	mg/kg	< 2	10	3.5	4.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	66	12	75	58
Copper	5	mg/kg	19	11	24	18
Lead	5	mg/kg	13	19	5.6	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	37	7.1	90	37
Zinc	5	mg/kg	53	17	24	57
Sample Properties						
% Moisture	1	%	17	15	22	16

Client Sample ID			BH17	[G01]BH18	BH19	BH20
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067402	S24-Ap0067403	S24-Ap0067404	S24-Ap0067405
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	100	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	100	< 50	< 50
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	120	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	120	< 100	< 100

Client Sample ID			BH17	[G01]BH18	BH19	BH20
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067402	S24-Ap0067403	S24-Ap0067404	S24-Ap0067405
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	112	99	105
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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	%	74	63	77	68
p-Terphenyl-d14 (surr.)	1	%	68	82	73	66
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05

Client Sample ID			BH17	[G01]BH18	BH19	BH20
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067402	S24-Ap0067403	S24-Ap0067404	S24-Ap0067405
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 10	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.5	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	75	104	99	89
Tetrachloro-m-xylene (surr.)	1	%	74	78	79	69
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 5	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 5	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 5	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	70	76	84	74

Client Sample ID			BH17	[G01]BH18	BH19	BH20
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Ap0067402	S24-Ap0067403	S24-Ap0067404	S24-Ap0067405
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	75	104	99	89
Tetrachloro-m-xylene (surr.)	1	%	74	78	79	69
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 1	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 1	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 2	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	51	66	61	58
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Heavy Metals						
Arsenic	2	mg/kg	3.4	5.2	4.3	3.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	67	66	64	44
Copper	5	mg/kg	18	23	20	19
Lead	5	mg/kg	6.2	18	9.0	6.9
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	55	44	53	39
Zinc	5	mg/kg	16	99	29	33
Sample Properties						
% Moisture	1	%	25	23	23	17

Client Sample ID			BH17A	BH8A
Sample Matrix			Soil	Soil
Eurofins Sample No.			S24-Ap0067406	S24-Ap0067407
Date Sampled			Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	115	117
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
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	%	74	70
p-Terphenyl-d14 (surr.)	1	%	69	66

Client Sample ID			BH17A	BH8A
Sample Matrix			Soil	Soil
Eurofins Sample No.			S24-Ap0067406	S24-Ap0067407
Date Sampled			Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit		
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-HCH	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	78	86
Tetrachloro-m-xylene (surr.)	1	%	74	69
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2

Client Sample ID			BH17A	BH8A
Sample Matrix			Soil	Soil
Eurofins Sample No.			S24-Ap0067406	S24-Ap0067407
Date Sampled			Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	71	75
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	78	86
Tetrachloro-m-xylene (surr.)	1	%	74	69
Phenols (Halogenated)				
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1
Phenols (non-Halogenated)				
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	55	59
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20

Client Sample ID			BH17A	BH8A
Sample Matrix			Soil	Soil
Eurofins Sample No.			S24-Ap0067406	S24-Ap0067407
Date Sampled			Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	2	mg/kg	2.3	4.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	49	40
Copper	5	mg/kg	14	18
Lead	5	mg/kg	< 5	8.5
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	41	40
Zinc	5	mg/kg	12	36
Sample Properties				
% Moisture	1	%	5.0	17

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	May 02, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	May 02, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Apr 26, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins ProMicro Pty Ltd
ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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

Company Name: Compaction & Soil Testing
Address: 1/78 Owen St
Glendenning
NSW 2761

Project Name: HUNTER STREET - MUSWELLBROOK
Project ID: SII 5183

Order No.:
Report #: 1091202
Phone: 02 9675 7522
Fax: 02 9675 7544

Received: Apr 24, 2024 11:43 PM
Due: May 3, 2024
Priority: 5 Day
Contact Name: Karl Davis

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	BH1	Apr 23, 2024		Soil	S24-Ap0067386	X	X	X	X
2	BH2	Apr 23, 2024		Soil	S24-Ap0067387	X	X	X	X
3	BH3	Apr 23, 2024		Soil	S24-Ap0067388	X	X	X	X
4	BH4	Apr 23, 2024		Soil	S24-Ap0067389	X	X	X	X
5	BH5	Apr 23, 2024		Soil	S24-Ap0067390	X	X	X	X
6	BH6	Apr 23, 2024		Soil	S24-Ap0067391	X	X	X	X
7	BH7	Apr 23, 2024		Soil	S24-Ap0067392	X	X	X	X
8	BH8	Apr 23, 2024		Soil	S24-Ap0067393	X	X	X	X
9	BH9	Apr 23, 2024		Soil	S24-Ap0067394	X	X	X	X
10	BH10	Apr 23, 2024		Soil	S24-Ap0067395	X	X	X	X
11	BH11	Apr 23, 2024		Soil	S24-Ap0067396	X	X	X	X
12	BH12	Apr 23, 2024		Soil	S24-Ap0067397	X	X	X	X
13	BH13	Apr 23, 2024		Soil	S24-Ap0067398	X	X	X	X

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins ProMicro Pty Ltd
ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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

Company Name: Compaction & Soil Testing
Address: 1/78 Owen St
Glendenning
NSW 2761

Project Name: HUNTER STREET - MUSWELLBROOK
Project ID: SII 5183

Order No.:
Report #: 1091202
Phone: 02 9675 7522
Fax: 02 9675 7544

Received: Apr 24, 2024 11:43 PM
Due: May 3, 2024
Priority: 5 Day
Contact Name: Karl Davis

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
14	BH14	Apr 23, 2024		Soil	S24-Ap0067399	X	X	X	X
15	BH15	Apr 23, 2024		Soil	S24-Ap0067400	X	X	X	X
16	BH16	Apr 23, 2024		Soil	S24-Ap0067401	X	X	X	X
17	BH17	Apr 23, 2024		Soil	S24-Ap0067402	X	X	X	X
18	BH18	Apr 23, 2024		Soil	S24-Ap0067403	X	X	X	X
19	BH19	Apr 23, 2024		Soil	S24-Ap0067404	X	X	X	X
20	BH20	Apr 23, 2024		Soil	S24-Ap0067405	X	X	X	X
21	BH17A	Apr 23, 2024		Soil	S24-Ap0067406		X	X	X
22	BH8A	Apr 23, 2024		Soil	S24-Ap0067407		X	X	X
Test Counts						20	22	22	22

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
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							
Phenols (non-Halogenated)							
Total Non-Halogenated Phenol*	mg/kg	-			20	N/A	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C34-C40	mg/kg	< 100			100	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	94			70-130	Pass	
Anthracene	%	91			70-130	Pass	
Benz(a)anthracene	%	91			70-130	Pass	
Benzo(a)pyrene	%	94			70-130	Pass	
Benzo(b&j)fluoranthene	%	92			70-130	Pass	
Benzo(g.h.i)perylene	%	90			70-130	Pass	
Benzo(k)fluoranthene	%	100			70-130	Pass	
Chrysene	%	101			70-130	Pass	
Dibenz(a.h)anthracene	%	84			70-130	Pass	
Fluoranthene	%	97			70-130	Pass	
Fluorene	%	93			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	89			70-130	Pass	
Naphthalene	%	92			70-130	Pass	
Phenanthrene	%	87			70-130	Pass	
Pyrene	%	97			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	102			70-130	Pass	
4.4'-DDD	%	103			70-130	Pass	
4.4'-DDE	%	99			70-130	Pass	
4.4'-DDT	%	113			70-130	Pass	
a-HCH	%	98			70-130	Pass	
Aldrin	%	96			70-130	Pass	
b-HCH	%	94			70-130	Pass	
d-HCH	%	96			70-130	Pass	
Dieldrin	%	98			70-130	Pass	
Endosulfan I	%	95			70-130	Pass	
Endosulfan II	%	96			70-130	Pass	
Endosulfan sulphate	%	111			70-130	Pass	
Endrin	%	110			70-130	Pass	
Endrin aldehyde	%	96			70-130	Pass	
Endrin ketone	%	106			70-130	Pass	
g-HCH (Lindane)	%	100			70-130	Pass	
Heptachlor	%	102			70-130	Pass	
Heptachlor epoxide	%	100			70-130	Pass	
Hexachlorobenzene	%	95			70-130	Pass	
Methoxychlor	%	106			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	116			70-130	Pass	
Dimethoate	%	102			70-130	Pass	
Ethion	%	113			70-130	Pass	
Fenitrothion	%	93			70-130	Pass	
Methyl parathion	%	114			70-130	Pass	
Mevinphos	%	107			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	88			70-130	Pass	
Aroclor-1260	%	99			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (Halogenated)							
2-Chlorophenol	%	88			25-140	Pass	
2.4-Dichlorophenol	%	93			25-140	Pass	
2.4.5-Trichlorophenol	%	80			25-140	Pass	
2.4.6-Trichlorophenol	%	83			25-140	Pass	
2.6-Dichlorophenol	%	101			25-140	Pass	
4-Chloro-3-methylphenol	%	94			25-140	Pass	
Pentachlorophenol	%	82			25-140	Pass	
Tetrachlorophenols - Total	%	85			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	100			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	91			25-140	Pass	
2-Nitrophenol	%	101			25-140	Pass	
2.4-Dimethylphenol	%	95			25-140	Pass	
2.4-Dinitrophenol	%	87			25-140	Pass	
2-Methylphenol (o-Cresol)	%	95			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	92			25-140	Pass	
4-Nitrophenol	%	83			25-140	Pass	
Dinoseb	%	100			25-140	Pass	
Phenol	%	95			25-140	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	87			70-130	Pass	
TRH C6-C10	%	83			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	82			70-130	Pass	
Toluene	%	85			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
m&p-Xylenes	%	97			70-130	Pass	
o-Xylene	%	81			70-130	Pass	
Xylenes - Total*	%	92			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	76			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	
Cadmium	%	95			80-120	Pass	
Chromium	%	88			80-120	Pass	
Copper	%	85			80-120	Pass	
Lead	%	82			80-120	Pass	
Mercury	%	99			80-120	Pass	
Nickel	%	92			80-120	Pass	
Zinc	%	90			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C10-C14	%	78			70-130	Pass	
TRH >C10-C16	%	71			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C10-C14	%	78			70-130	Pass	
TRH >C10-C16	%	78			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery									
Total Recoverable Hydrocarbons									
TRH C10-C14			%	78			70-130	Pass	
TRH >C10-C16			%	77			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-Ap0072897	NCP	%	79			70-130	Pass	
TRH C6-C10	S24-Ap0072897	NCP	%	80			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-Ap0072897	NCP	%	87			70-130	Pass	
Toluene	S24-Ap0072897	NCP	%	91			70-130	Pass	
Ethylbenzene	S24-Ap0072897	NCP	%	96			70-130	Pass	
m&p-Xylenes	S24-Ap0072897	NCP	%	100			70-130	Pass	
o-Xylene	S24-Ap0072897	NCP	%	99			70-130	Pass	
Xylenes - Total*	S24-Ap0072897	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Ap0072897	NCP	%	78			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-Ap0066575	NCP	%	89			70-130	Pass	
4.4'-DDD	S24-Ap0066575	NCP	%	93			70-130	Pass	
4.4'-DDE	S24-Ap0066575	NCP	%	89			70-130	Pass	
4.4'-DDT	S24-Ap0066575	NCP	%	105			70-130	Pass	
a-HCH	S24-Ap0066575	NCP	%	85			70-130	Pass	
Aldrin	S24-Ap0066575	NCP	%	87			70-130	Pass	
b-HCH	S24-Ap0066575	NCP	%	77			70-130	Pass	
d-HCH	S24-Ap0066575	NCP	%	80			70-130	Pass	
Dieldrin	S24-Ap0066575	NCP	%	90			70-130	Pass	
Endosulfan I	S24-Ap0066575	NCP	%	92			70-130	Pass	
Endosulfan II	S24-Ap0066575	NCP	%	89			70-130	Pass	
Endosulfan sulphate	S24-Ap0066575	NCP	%	111			70-130	Pass	
Endrin	S24-Ap0066575	NCP	%	104			70-130	Pass	
Endrin aldehyde	S24-Ap0066575	NCP	%	92			70-130	Pass	
Endrin ketone	S24-Ap0066575	NCP	%	106			70-130	Pass	
g-HCH (Lindane)	S24-Ap0066575	NCP	%	91			70-130	Pass	
Heptachlor	S24-Ap0066575	NCP	%	92			70-130	Pass	
Heptachlor epoxide	S24-Ap0066575	NCP	%	88			70-130	Pass	
Hexachlorobenzene	S24-Ap0066575	NCP	%	83			70-130	Pass	
Methoxychlor	S24-Ap0066575	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S24-Ap0067386	CP	%	75			70-130	Pass	
Dimethoate	S24-Ap0072379	NCP	%	79			70-130	Pass	
Ethion	S24-Ap0067386	CP	%	94			70-130	Pass	
Methyl parathion	S24-Ap0072379	NCP	%	77			70-130	Pass	
Mevinphos	S24-Ap0072379	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S24-Ap0066575	NCP	%	75			70-130	Pass	
Aroclor-1260	S24-Ap0066575	NCP	%	90			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S24-Ap0068469	NCP	%	82			30-130	Pass	
4-Chloro-3-methylphenol	S24-Ap0068469	NCP	%	75			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Nitrophenol	S24-Ap0068469	NCP	%	71			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Ap0067387	CP	%	80			75-125	Pass	
Cadmium	S24-Ap0067387	CP	%	82			75-125	Pass	
Chromium	S24-Ap0067387	CP	%	90			75-125	Pass	
Copper	S24-Ap0067387	CP	%	83			75-125	Pass	
Lead	S24-Ap0067387	CP	%	80			75-125	Pass	
Mercury	S24-Ap0067387	CP	%	92			75-125	Pass	
Nickel	S24-Ap0067387	CP	%	98			75-125	Pass	
Zinc	S24-Ap0067387	CP	%	87			75-125	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Fenitrothion	S24-Ap0064528	NCP	%	115			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2.4-Dichlorophenol	S24-Ap0059496	NCP	%	85			30-130	Pass	
2.4.5-Trichlorophenol	S24-Ap0059496	NCP	%	86			30-130	Pass	
2.4.6-Trichlorophenol	S24-Ap0059496	NCP	%	94			30-130	Pass	
2.6-Dichlorophenol	S24-Ap0059496	NCP	%	86			30-130	Pass	
Tetrachlorophenols - Total	S24-Ap0059496	NCP	%	85			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S24-Ap0059496	NCP	%	76			30-130	Pass	
2.4-Dimethylphenol	S24-Ap0059496	NCP	%	75			30-130	Pass	
2-Methylphenol (o-Cresol)	S24-Ap0059496	NCP	%	85			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S24-Ap0059496	NCP	%	80			30-130	Pass	
4-Nitrophenol	S24-Ap0059496	NCP	%	77			30-130	Pass	
Dinoseb	S24-Ap0059496	NCP	%	78			30-130	Pass	
Phenol	S24-Ap0059496	NCP	%	86			30-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S24-Ap0067407	CP	%	88			70-130	Pass	
TRH >C10-C16	S24-Ap0067407	CP	%	84			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Ap0067393	CP	%	16	18	11	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S24-Ap0067396	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-Ap0067396	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-Ap0067396	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S24-Ap0067396	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-Ap0067396	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-Ap0067396	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-Ap0067396	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S24-Ap0067396	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Ethion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S24-Ap0067396	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S24-Ap0067396	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S24-Ap0067396	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S24-Ap0067396	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S24-Ap0067396	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S24-Ap0067396	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S24-Ap0067396	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S24-Ap0067396	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S24-Ap0067396	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S24-Ap0067396	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S24-Ap0067396	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S24-Ap0067396	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S24-Ap0067396	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S24-Ap0067396	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S24-Ap0067396	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S24-Ap0067396	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S24-Ap0067396	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S24-Ap0067397	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-Ap0067397	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-Ap0067397	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S24-Ap0067397	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-Ap0067397	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-Ap0067397	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-Ap0067397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Coumaphos	S24-Ap0067397	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S24-Ap0067397	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S24-Ap0067397	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S24-Ap0067397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S24-Ap0067397	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S24-Ap0067397	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S24-Ap0067397	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S24-Ap0067397	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S24-Ap0067397	CP	mg/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S24-Ap0067397	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S24-Ap0067397	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S24-Ap0067397	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S24-Ap0067397	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S24-Ap0067397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S24-Ap0067397	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S24-Ap0067397	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S24-Ap0067397	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S24-Ap0067397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Ap0067397	CP	mg/kg	2.3	2.4	5.3	30%	Pass	
Chromium	S24-Ap0067397	CP	mg/kg	58	67	13	30%	Pass	
Copper	S24-Ap0067397	CP	mg/kg	19	20	5.7	30%	Pass	
Lead	S24-Ap0067397	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	S24-Ap0067397	CP	mg/kg	49	46	5.7	30%	Pass	
Zinc	S24-Ap0067397	CP	mg/kg	22	25	13	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Ap0067398	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S24-Ap0067398	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-Ap0067398	CP	mg/kg	66	62	7.1	30%	Pass	
Copper	S24-Ap0067398	CP	mg/kg	19	19	1.3	30%	Pass	
Lead	S24-Ap0067398	CP	mg/kg	13	12	5.8	30%	Pass	
Mercury	S24-Ap0067398	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-Ap0067398	CP	mg/kg	37	37	1.2	30%	Pass	
Zinc	S24-Ap0067398	CP	mg/kg	53	54	1.7	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S24-Ap0067406	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	S24-Ap0067406	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-Ap0067406	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-Ap0067406	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-Ap0067406	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-Ap0067406	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-Ap0067406	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-Ap0067406	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Ap0067406	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Nileshni Goundar	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Laxman Dias	Senior Analyst-Asbestos
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Sample Properties
Roopesh Rangarajan	Senior Analyst-Volatile

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

Compaction & Soil Testing
1/78 Owen St
Glendenning
NSW 2761

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:	Karl Davis
Report	1091202-AID
Project Name	HUNTER STREET - MUSWELLBROOK
Project ID	SII 5183
Received Date	Apr 24, 2024
Date Reported	May 07, 2024

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.*

Project Name HUNTER STREET - MUSWELLBROOK
Project ID SII 5183
Date Sampled Apr 23, 2024
Report 1091202-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH1	24-Ap0067386	Apr 23, 2024	Approximate Sample 71g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH2	24-Ap0067387	Apr 23, 2024	Approximate Sample 75g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH3	24-Ap0067388	Apr 23, 2024	Approximate Sample 63g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH4	24-Ap0067389	Apr 23, 2024	Approximate Sample 108g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH5	24-Ap0067390	Apr 23, 2024	Approximate Sample 56g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH6	24-Ap0067391	Apr 23, 2024	Approximate Sample 95g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH7	24-Ap0067392	Apr 23, 2024	Approximate Sample 127g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH8	24-Ap0067393	Apr 23, 2024	Approximate Sample 61g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH9	24-Ap0067394	Apr 23, 2024	Approximate Sample 81g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH10	24-Ap0067395	Apr 23, 2024	Approximate Sample 140g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH11	24-Ap0067396	Apr 23, 2024	Approximate Sample 81g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH12	24-Ap0067397	Apr 23, 2024	Approximate Sample 54g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH13	24-Ap0067398	Apr 23, 2024	Approximate Sample 42g Sample consisted of: Brown fine-grained clayey soil, plant residue and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH14	24-Ap0067399	Apr 23, 2024	Approximate Sample 70g Sample consisted of: Brown fine-grained clayey soil, plant residue and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH15	24-Ap0067400	Apr 23, 2024	Approximate Sample 81g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH16	24-Ap0067401	Apr 23, 2024	Approximate Sample 93g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH17	24-Ap0067402	Apr 23, 2024	Approximate Sample 59g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH18	24-Ap0067403	Apr 23, 2024	Approximate Sample 100g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH19	24-Ap0067404	Apr 23, 2024	Approximate Sample 99g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH20	24-Ap0067405	Apr 23, 2024	Approximate Sample 96g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 26, 2024	Indefinite

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins ProMicro Pty Ltd
ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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

Company Name: Compaction & Soil Testing
Address: 1/78 Owen St
Glendenning
NSW 2761

Project Name: HUNTER STREET - MUSWELLBROOK
Project ID: SII 5183

Order No.:
Report #: 1091202
Phone: 02 9675 7522
Fax: 02 9675 7544

Received: Apr 24, 2024 11:43 PM
Due: May 3, 2024
Priority: 5 Day
Contact Name: Karl Davis

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	BH1	Apr 23, 2024		Soil	S24-Ap0067386	X	X	X	X
2	BH2	Apr 23, 2024		Soil	S24-Ap0067387	X	X	X	X
3	BH3	Apr 23, 2024		Soil	S24-Ap0067388	X	X	X	X
4	BH4	Apr 23, 2024		Soil	S24-Ap0067389	X	X	X	X
5	BH5	Apr 23, 2024		Soil	S24-Ap0067390	X	X	X	X
6	BH6	Apr 23, 2024		Soil	S24-Ap0067391	X	X	X	X
7	BH7	Apr 23, 2024		Soil	S24-Ap0067392	X	X	X	X
8	BH8	Apr 23, 2024		Soil	S24-Ap0067393	X	X	X	X
9	BH9	Apr 23, 2024		Soil	S24-Ap0067394	X	X	X	X
10	BH10	Apr 23, 2024		Soil	S24-Ap0067395	X	X	X	X
11	BH11	Apr 23, 2024		Soil	S24-Ap0067396	X	X	X	X
12	BH12	Apr 23, 2024		Soil	S24-Ap0067397	X	X	X	X
13	BH13	Apr 23, 2024		Soil	S24-Ap0067398	X	X	X	X

eurofins

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

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

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

Eurofins ProMicro Pty Ltd
ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

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

Company Name: Compaction & Soil Testing
Address: 1/78 Owen St
Glendenning
NSW 2761

Project Name: HUNTER STREET - MUSWELLBROOK
Project ID: SII 5183

Order No.:
Report #: 1091202
Phone: 02 9675 7522
Fax: 02 9675 7544

Received: Apr 24, 2024 11:43 PM
Due: May 3, 2024
Priority: 5 Day
Contact Name: Karl Davis

Eurofins Analytical Services Manager : Adam Bateup

Sample Detail						Asbestos - AS4964	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
14	BH14	Apr 23, 2024		Soil	S24-Ap0067399	X	X	X	X
15	BH15	Apr 23, 2024		Soil	S24-Ap0067400	X	X	X	X
16	BH16	Apr 23, 2024		Soil	S24-Ap0067401	X	X	X	X
17	BH17	Apr 23, 2024		Soil	S24-Ap0067402	X	X	X	X
18	BH18	Apr 23, 2024		Soil	S24-Ap0067403	X	X	X	X
19	BH19	Apr 23, 2024		Soil	S24-Ap0067404	X	X	X	X
20	BH20	Apr 23, 2024		Soil	S24-Ap0067405	X	X	X	X
21	BH17A	Apr 23, 2024		Soil	S24-Ap0067406		X	X	X
22	BH8A	Apr 23, 2024		Soil	S24-Ap0067407		X	X	X
Test Counts						20	22	22	22

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 the colour **blue** 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 the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
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:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**). This estimate is not NATA-accredited.
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w**).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
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.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
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* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

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

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos

Authorised by:

Laxman Dias	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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