Level 19, Tower B, 799 Pacific Highway
Chatswood
NSW 2067 Australia

T: +61 2 9406 1000
f: +61 2 9406 1002

coffey.com

Maria Doumit
Transport for New South Wales
Level 9, 10-14 Smith Street
Parramatta, NSW 2150

Ref: SYDEN279944-L01

13 January 2021

Attention: Maria Doumit

Dear Maria,

RE: Waste Classification Assessment of the Intersection of Pennant Hills Road and North Rocks Road, Carlingford, NSW

1. Introduction

Coffey Services Australia Pty Ltd (Coffey) was engaged by Transport for New South Wales (TfNSW) to carry out an in-situ Waste Classification Assessment for the proposed road upgrade at Pennant Hills Road and North Rocks Road, NSW (the site). The location of the site is shown on Figure 1 (Attachment B).

Coffey understands that TfNSW is proposing to carry out road improvements on Pennant Hills Road and North Rocks Road. These improvements involved the provision of an additional through lane and new intersection configurations on Pennant Hills Road and North Rocks Road, which would ease congestion and improve traffic flow along the corridor.

1.1. Description of Proposed Works

It is understood that the works at the Pennant Hills Road and North Rocks Road Intersection may include:

North Rocks Road (westbound).

- Proposed 80m right turn bay.
- Proposed widen median.

North Rocks Road (eastbound).

- Proposed dual right turn from North Rocks Road West.

- Proposed 80m right turn bay.

Pennant Hills Road (northbound).

- Conversion of left turn lane into a through and left lane.
- Existing indented bus bay to be relocated as shelter within verge.
- Conversion of existing lane merge (north of North Rocks Road) into third lane on Pennant Hills Road northbound.

Pennant Hills Road (southbound)

- Proposed 120m long kerb side lane (south of North Rocks Road).
- Proposed raised median and traffic island.
- Existing indented bus bay to be relocated as shelter within verge.
- Proposed left turn slip lane onto North Rocks Road.
- Proposed additional through lane (north of North Rocks Road).

At the time of writing this report, the depth of excavations and the approximate volume of excess material requiring disposal had not been provided.

2. Background

EMM consulting Pty Ltd (EMM) was engaged by TfNSW to undertake a preliminary site investigation (PSI) of the BP Carlingford service station at 712-714 Pennant Hills Road, Carlingford. TfNSW was intending to acquire approximately 260m^2 of the property as part of the upgrade project and requested the PSI to inform potential contamination risks for the potential acquisition.

Review of the PSI indicated that the site was developed as a service station in the 1960's with the investigation also identifying two previous fuel service stations at 639 and 710 Pennant Hills Road. While the report notes that there is a potential for hydrocarbon contamination to be present at the site, it goes on to state that this would typically be at depths within the saturated zone (gauging documentation indicated that this was at approximately 3.3 to 4.4 metres below ground level). The report considered that construction works would be represent a low risk of contamination to human and/or ecological receptors and remediation and management measures could be implemented to manage and mitigate potential risks during construction.

A web search of the NSW EPA List of Notified Sites and the NSW EPA Contaminated Land Record did not identify the BP Service Station on either listing or record.

3. Objective

The objective of the in-situ waste classification assessments was to classify the soil at the site for off-site disposal at an appropriately licensed landfill facility in accordance with the NSW EPA Waste Classification Guidelines (2014).

4. Scope of Works

To fulfil the objectives, Coffey undertook the following scope of works:

- Fieldwork Preliminaries comprising:
  - Development of a Site Safety Plan (SSP) and Safe Work Method Statements (SWMS);
  - Dial Before You Dig (DBYD) search;
- Fieldwork comprising:
  - Walkover of the Site to identify potentially contaminating features and/or suspected asbestos-containing materials (ACM).
  - Underground service locating using a Telstra Accredited Service Locator;
  - Progression of 23 boreholes using a hand auger in accessible portions of the site.
  - Collection of soil samples from each borehole.
  - Collection of soil samples at six boreholes drilled by TfNSW subcontractor for geotechnical purposes, from the solid flight auger.
  - Logging of ground conditions at each borehole.
  - Field screening of soil samples from the boreholes using a photo-ionisation detector (PID).
  - Backfilling of the boreholes in reverse order of excavation.
- Laboratory analysis of a selection of soil samples at a National Association of Testing Authorities (NATA) accredited laboratory for contaminants of potential concern (CoPC) typically associated with uncontrolled fill.
- Preparation of this Waste Classification Assessment letter report.

5. Technical Framework/Standards

Works were carried out in general accordance with Coffey's Standard Operating Procedures which are based on industry practice and the following:

- NSW Work Health and Safety Act 2011 (WHS Act 2011);
- NSW Work Health and Safety Regulation 2011 (WHS Regulation 2017);
- Protection of the Environment Operations (POEO) Act 1997 (POEO Act 1997);
- National Environment Protection Council, National Environment Protection (Assessment of Site Contamination) Measure, 1999 (April 2013) (NEPM 2013);
- NSW Environment Protection Authority (EPA) Waste Classification Guidelines: Part 1 – Classifying Waste, 2014 (NSW EPA Waste Classification Guidelines 2014);
- NSW Environment Protection Authority (EPA) Protection of the Environment Operations (Waste) Regulations, 2014 (NSW EPA 2014);
- Australian Standard (AS) 4482.1, Guide to Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile Compounds, 2005 (AS 4482.1);
- AS 4482.2, Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances, 1999 (AS 4482.2); and
- AS 1726 Geotechnical Site Investigations, 2017 (AS 1726).

6. Site Description

The following site description is based on observations made during a walkover of the site carried out by an Environmental Consultant from Coffey on 20 November 2020:

- The Site along Pennant Hills Road and North Rocks Road was largely comprised the grassed road verge located on either side of each roadway.
- The northern portion of Pennant Hills Road was largely flat, and then began to increase in elevation south of Roselea Community centre to North Rocks Road.
- At the north end of the site along Pennant Hills Road, a large embankment was present on the western side of the road, although appeared to conform largely to the natural topography of the surrounding area suggesting that this portions of Pennant Hills Road in this area had been cut into the surrounding landscape.
- The site was largely surrounded by low-density residential housing, although a BP service station was noted on the western side of Pennant Hills Road, along with a car wash on the western side near the northern end of the site. Across the road on the eastern side there was a small number of commercial businesses and the Roselea Community Centre present.
- North Rocks Road appeared to slope down from the intersection of Pennant Hills road, both to the east and west.
- The proposed construction compound area (comprised of Lot's 1 – 3 in Deposited Plan 205746) was largely grass covered, with two large trees observed near the centre of the property.
    - Suspected asbestos containing materials (ACM) in the form of fibre cement fragments were observed on the ground surface at the base of the southern large tree. The fragments appeared to be in relatively good condition, angular in appearance and were not pulverisable by hand pressure. The fragments also appeared to be confined to the soil surface. A sample of the suspected ACM was collected as ACM1 for laboratory analysis.
    - What appeared to be footings and foundation slab were noted at the surface at several locations suggesting that structures (likely residential) had previously been situated on the property.
- No stained or mal-odorous soils were identified during the site walkover.

The layout of the site is shown on Figure 1. Photographs taken during the site walkover are presented in Attachment C.

7. Fieldwork and Observations

Fieldwork was carried out at night by an environmental consultant from Coffey on 23 November, 1, 2 and 9 December 2020.

Twenty-three boreholes (BH01 – BH23) were advanced at the site using a hand auger. The locations (as shown on Figure 2 attached) were placed to provide general coverage across the Site. Locations BH08 – BH11A were situated within the proposed construction compound. Six geotechnical boreholes (GBH02 – BH06 & GBH08) were drilled by TfNSW geotechnical engineers, or their subcontractors at the site.

In summary, soil at the Site was noted to consist of the following:

- Fill material generally consisting largely of dark brown sandy silt topsoils, dark brown reworked silty clays, and/or road base to approximately 0.1 – 0.6 mBGL. Sandy silt was generally noted to

consist of fine to medium to coarse grained sand, with silty clays. Road base was largely comprised of large, angular blue-metal gravels with little fines.

- Residual material was generally comprised of red to brown clay with low plasticity and was stiff and dry, which was underlain by highly weathered yellow to white sandstone.
- Bedrock was generally comprised of highly weathered sandstone.

Samples were collected from the hand auger or drilling auger at each borehole using disposable nitrile gloves. Samples were placed in laboratory supplied soil jars (250mL) with teflon lids and ziplock bags, where appropriate. Samples were collected from the ground surface and at regular intervals to the base of the borehole.

A PID was used to screen the soil samples for the presence of ionisable volatile organic compounds (VOC). The PID readings were less than 10 parts per million (ppm) indicating a low likelihood that volatile organic compounds were present.

The PID calibration certificate is presented in Attachment D.

8. Laboratory Analysis and Analytical Results

Samples were analysed by Eurofins (primary laboratory) and ALS (secondary laboratory) using NATA accredited methods for the analytical suite outlined in Table 1. Samples were selected from each borehole to provide general coverage, both spatially and at depth for different soil types encountered. The laboratory reports
(Ref: ES2043529_0, 754-SYDEN279944, 759675, 761623, 762036, 761999, 763628, 763264, 765392) are provided in Attachment F.

The analytical suite carried out is typically associated with uncontrolled fill.

A review of the analytical results against waste classification criteria (NSW EPA 2014) indicates that:

- With the exception of benzo(a)pyrene (BaP) and total polycyclic aromatic hydrocarbons (PAH) in sample BH13_0.5_0.6, concentrations of analytes in soil tested were less than the relevant CT1, SCC1 and/or TCLP1 values for general solid waste.
  - Concentrations of BaP in sample BH13_0.5_0.6 exceeded SCC2 criteria for Hazardous Waste.
  - Concentrations of PAHs in sample BH13_0.5_0.6 exceeded SCC1 criteria for Restricted Waste.
  - Subsequent Toxicity Characteristic Leaching Procedure (TCLP) analysis indicated that leachable concentrations of BaP were less than the laboratory limit of reporting and TCLP results for total PAHs indicated a low potential for leachability (0.002 mg/kg)[1].
  - Associated PID readings for this sample were 0.9 ppm.
  - Review of the associated field logs relating to this sample did not identify malodourous soils, nor was asphalt visually identified within the sampled material.

[1] The associated TCLP analysis was undertaken outside of the holding time for the associated sample; this was due to an error in ESDAT when uploading the data initially. However, this would not affect the conclusion of the waste classification.

  - Concentration of Total Petroleum Hydrocarbons (TPH) were also noted at this location, subsequent laboratory analysis using silica-gel clean-up indicates that the concentrations of TPH were unlikely to be attributed to a vegetative source and are likely the cause of hydrocarbon impact.
- Asbestos was not detected in the soil samples analysed at the reporting limit of 0.1g/kg, or by trace analysis.
- Asbestos was detected in sample ACM1, collected from fibre cement fragments identified on the soil surface at the base of a tree situated within the proposed compound area.
- With the exception of PAH at BH13_0.5-0.6, samples analysis undertaken on natural material comprised of clay and underlying sandstone bedrock were less than the laboratory LOR for TPH, PAH and BTEX, concentrations of metals in these samples were considered to be representative of background conditions for natural materials.

9. Quality Assurance and Quality Control

Sampling was conducted in general accordance with Coffey's Standard Operating Procedures, which are based on relevant regulatory guidelines and Australian standards.

Samples were stored in ice-cooled eskies following collection and transported to the laboratory with 'chain of custody' documentation.

A review of the analytical reports indicates that:

- The samples were chilled and correctly preserved.
- Appropriate sample containers were used.
- Samples were received within the recommended holding times.
- Results were NATA endorsed.
- Review of Relative Percent Differential (RPD) results between the primary sample and duplicate and triplicate samples were considered acceptable with the exception of the following:
  - RPD for zinc between primary sample BH11A_0.0_0.1 and interlaboratory sample QC2 was 51%. It is considered that the difference can likely be attributed to heterogeneity within the fill and is not considered to affect the outcome of the assessment.
- Concentrations of CoPC in the rinsate blanks (denoted as R1 and R2) were less than the laboratory limit of reporting.
- Concentration of CoPC in the trip blank were less than the laboratory limit of reporting.
- The trip spike recoveries were considered to be acceptable.

In summary, the data is considered to be usable for the objective of the works.

10. Waste Classification

The waste classification was conducted in general accordance with the procedures for classifying waste as detailed in the *Waste Classification Guidelines - Part 1: Classifying Waste (NSW EPA, 2014*).

According to the Waste Classification procedure:

- Step 1: With the exception of surface ACM in the compound, the materials assessed are not considered to be Special Waste (Asbestos Waste).
- Step 2: The materials assessed are not considered to be a liquid waste;
- Step 3: The materials observed are considered not to be pre-classified;
- Step 4: The materials assessed are not considered to possess hazardous characteristics;
- Step 5: Based on chemical characterisation against relevant chemical threshold values listed in Tables 1 and 2 of the NSW EPA (2014) guidelines, the materials assessed meet the relevant General Solid Waste criteria (CT1, SCC1 and/or TCLP1) with the exception of BH13. BaP at BH13_0.5-0.6 exceeded the Hazardous Waste criteria and is considered to be an anomaly.
- Step 6: Coffey considered that the assessed soil was non-putrescible because it did not include timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials.

Contaminant threshold (CT) and specific contaminant concentration (SCC) values were adopted from NSW EPA Waste Classification Guidelines to provide an indication of waste classification status of soil for disposal to landfill. The CT values adopted are outlined in Table 1 and in Attachment E.

11. Conclusions and Recommendations

Coffey recommends the following:

- Additional characterisation/delineation of (1) the ACM impact on the surface of the compound; and (2) the BaP/PAH anomaly in the vicinity of BH13.
- Subject to findings of the additional characterisation/delineation and implementation of an unexpected finds protocol, the assessed fill materials may be managed as General Solid Waste (non-putrescible) for offsite disposal purposes. The underlying natural clays and sandstone, if not mixed with other materials, may be managed as virgin excavated natural material (VENM),
- This Waste Classification Assessment report is sent to the proposed receiving facility to confirm acceptance of the soil prior to off-site disposal.
- Waste must be transported by an appropriately licensed waste contractor and disposed to a facility that is licensed to receive that class of waste.
- An environmental consultant should be in attendance during excavation of the road and verge in front of the service station and car wash properties to assist in confirming the material present is consistent with this classification or if additional sampling may be required.
- If any unexpected finds of contamination are discovered during future handling of this material, these materials should be segregated and assessed separately. If ACM is identified within the soil during excavation and the ACM cannot be segregated/removed, then the soil in which it was identified shall be classified as Special Waste (Asbestos Waste).

Should the description of the soil differ materially from that described in this letter report, then further assessment for waste classification purposes may be required prior to off-site disposal.

12. Limitations

We draw your attention to the attached sheets titled “Important Information about your Coffey Environmental Report” (Attachment A) which should be read in conjunction with this letter. Our waste classification is applicable to the tested locations. Areas outside of the tested locations are not covered by this waste classification. Assessment of land use suitability in accordance with the NEPM approach is outside the scope of this waste classification.

13. Closure

We trust this waste classification assessment meets your requirements. Please do not hesitate to contact Sam Gunasekera or the undersigned if you have any questions.

For and on Behalf of Coffey

Simon Hay
Environmental Scientist

Attachments:

Attachment A –Important Information About Your Coffey Environmental Report

Attachment B –Figures

Attachment C – Photographs

Attachment D – Calibration Certificate

Attachment E – Tables

Attachment F – Laboratory Reports

Attachment A: Important Information about your Coffey Environmental Report

Important information about your **Coffey** Environmental Report

Introduction

This report has been prepared by Coffey for you, as Coffey's client, in accordance with our agreed purpose, scope, schedule and budget.

The report has been prepared using accepted procedures and practices of the consulting profession at the time it was prepared, and the opinions, recommendations and conclusions set out in the report are made in accordance with generally accepted principles and practices of that profession.

The report is based on information gained from environmental conditions (including assessment of some or all of soil, groundwater, vapour and surface water) and supplemented by reported data of the local area and professional experience. Assessment has been scoped with consideration to industry standards, regulations, guidelines and your specific requirements, including budget and timing. The characterisation of site conditions is an interpretation of information collected during assessment, in accordance with industry practice.

This interpretation is not a complete description of all material on or in the vicinity of the site, due to the inherent variation in spatial and temporal patterns of contaminant presence and impact in the natural environment. Coffey may have also relied on data and other information provided by you and other qualified individuals in preparing this report. Coffey has not verified the accuracy or completeness of such data or information except as otherwise stated in the report. For these reasons the report must be regarded as interpretative, in accordance with industry standards and practice, rather than being a definitive record.

Your report has been written for a specific purpose

Your report has been developed for a specific purpose as agreed by us and applies only to the site or area investigated. Unless otherwise stated in the report, this report cannot be applied to an adjacent site or area, nor can it be used when the nature of the specific purpose changes from that which we agreed.

For each purpose, a tailored approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible quantify, risks that both recognised and potential contamination pose in the context of the agreed purpose. Such risks may be financial (for example, clean up costs or constraints on site use) and/or physical (for example, potential health risks to users of the site or the general public).

Limitations of the Report

The work was conducted, and the report has been prepared, in response to an agreed purpose and scope, within time and budgetary constraints, and in reliance on certain data and information made available to Coffey.

The analyses, evaluations, opinions and conclusions presented in this report are based on that purpose and scope, requirements, data or information, and they could change if such requirements or data are inaccurate or incomplete.

This report is valid as of the date of preparation. The condition of the site (including subsurface conditions) and extent or nature of contamination or other environmental hazards can change over time, as a result of either natural processes or human influence. Coffey should be kept appraised of any such events and should be consulted for further investigations if any changes are noted, particularly during construction activities where excavations often reveal subsurface conditions.

In addition, advancements in professional practice regarding contaminated land and changes in applicable statues and/or guidelines may affect the validity of this report. Consequently, the currency of conclusions and recommendations in this report should be verified if you propose to use this report more than 6 months after its date of issue.

The report does not include the evaluation or assessment of potential geotechnical engineering constraints of the site.

Interpretation of factual data

Environmental site assessments identify actual conditions only at those points where samples are taken and on the date collected. Data derived from indirect field measurements, and sometimes other reports on the site, are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions.

Variations in soil and groundwater conditions may occur between test or sample locations and actual conditions may differ from those inferred to exist. No environmental assessment program, no matter how comprehensive, can reveal all subsurface details and anomalies. Similarly, no professional, no matter how well qualified, can reveal what is hidden by earth, rock or changed through time.

The actual interface between different materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions.

For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of a suitably qualified and experienced environmental consultant through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other unrecognised features encountered on site. Coffey would be pleased to assist with any investigation or advice in such circumstances.

Recommendations in this report

This report assumes, in accordance with industry practice, that the site conditions recognised through discrete sampling are representative of actual conditions throughout the investigation area. Recommendations are based on the resulting interpretation.

Should further data be obtained that differs from the data on which the report recommendations are based (such as through excavation or other additional assessment), then the recommendations would need to be reviewed and may need to be revised.

Report for benefit of client

Unless otherwise agreed between us, the report has been prepared for your benefit and no other party. Other parties should not rely upon the report or the accuracy or completeness of any recommendation and should make their own enquiries and obtain independent advice in relation to such matters.

Coffey assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report.

To avoid misuse of the information presented in your report, we recommend that Coffey be consulted before the report is provided to another party who may not be familiar with the background and the purpose of the report. In particular, an environmental disclosure report for a property vendor may not be suitable for satisfying the needs of that property's purchaser. This report should not be applied for any purpose other than that stated in the report.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, a suitably qualified and experienced environmental consultant should be retained to explain the implications of the report to other professionals referring to the report and then review plans and specifications produced to see how other professionals have incorporated the report findings.

Given Coffey prepared the report and has familiarity with the site, Coffey is well placed to provide such assistance. If another party is engaged to interpret the recommendations of the report, there is a risk that the contents of the report may be misinterpreted and Coffey disowns any responsibility for such misinterpretation.

Data should not be separated from the report

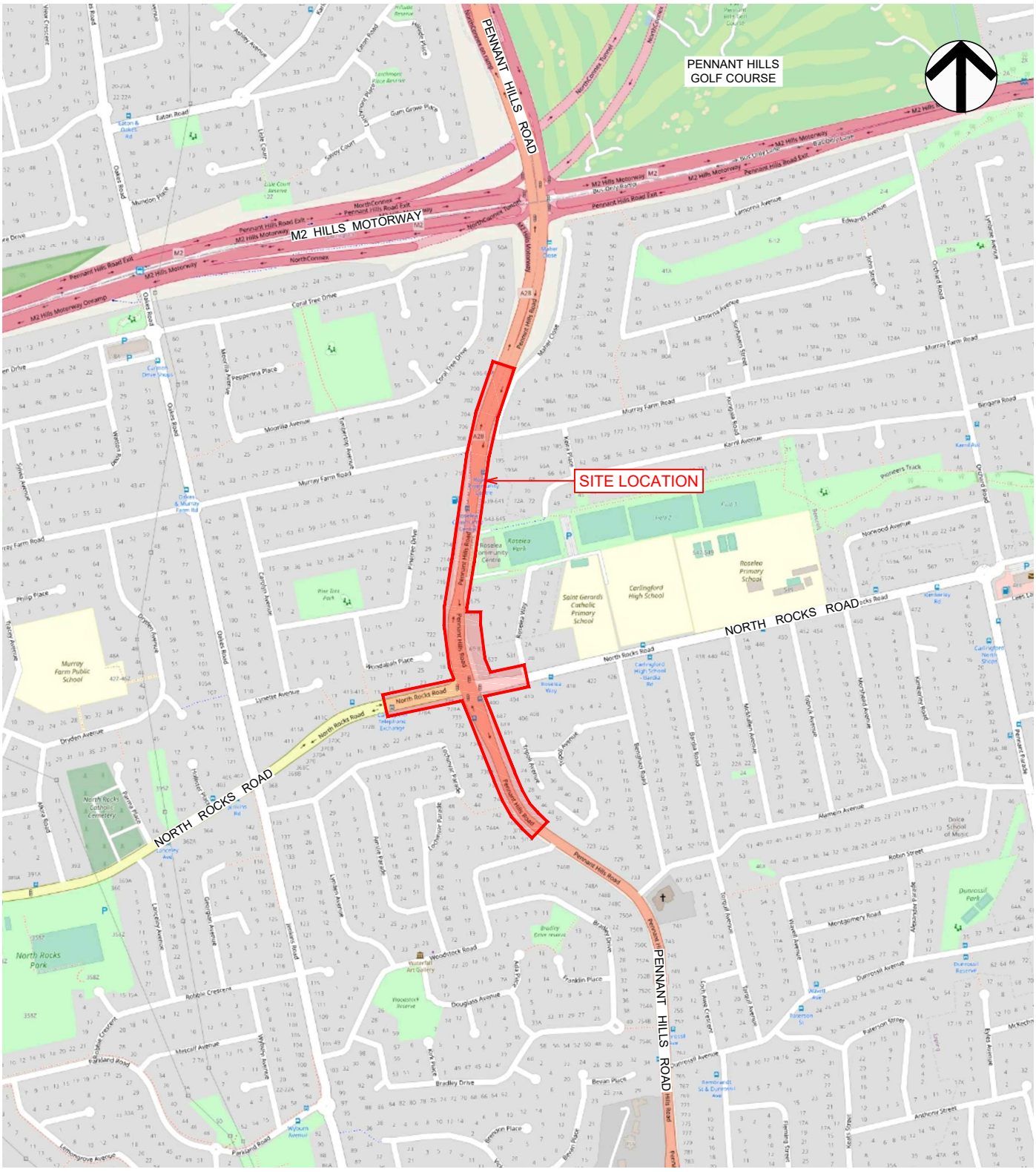
The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists or engineers based on their interpretation of field logs, field testing and laboratory evaluation of samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

This report should be reproduced in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.

Responsibility

Environmental reporting relies on interpretation of factual information using professional judgement and opinion and has a level of uncertainty attached to it, which is much less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. As noted earlier, the recommendations and findings set out in this report should only be regarded as interpretive and should not be taken as accurate and complete information about all environmental media at all depths and locations across the site.

Attachment B: Figures



MAP PROJECTION: GDA2020 MGA ZONE 56

100 0 100 300 500

Scale (metres) 1:10000

drawn	SH / AW
approved	SH
date	22-12-2020
scale	AS SHOWN
original size	A4

coffey
A TETRA TECH COMPANY

client: TRANSPORT FOR NEW SOUTH WALES

project: PENNANT HILLS ROAD WASTE CLASSIFICATION ASSESSMENT
INTERSECTION OF PENNANT HILLS ROAD
AND NORTH ROCKS ROAD, CARLINGFORD, NSW

title: SITE LOCATION PLAN

project no: 754-SYDEN279944-L01 | figure no: FIGURE 1 | rev: A

PLOT DATE: 22/12/2020 1:05:14 PM DWG FILE: \\TTIS779FS1.TT.LOCAL\DATA\1. PROJECTS\1. SYDENENV\2020\754-SYDEN279944 TFNSW PENNANT HILLS ROAD CARLINGFORD\12. CAD\754-SYDEN279944-L01.DWG

revision	no.	description	drawn	approved	date
	A	ORIGINAL ISSUE	AW	SH	22-12-2020

LEGEND

- SITE BOUNDARY
- BOREHOLE LOCATION
- ASBESTOS SAMPLE LOCATION
- HAND AUGERED BOREHOLE LOCATION
- TfNSW GEOTECHNICAL BOREHOLE LOCATION

MAP PROJECTION: GDA2020 MGA ZONE 56

50 0 50 100 150

Scale (metres) 1:3000

drawn	SH / AW
approved	SH
date	22-12-2020
scale	AS SHOWN
original size	A3

coffey
A TETRA TECH COMPANY

client: TRANSPORT FOR NEW SOUTH WALES

project: PENNANT HILLS ROAD WASTE CLASSIFICATION ASSESSMENT
INTERSECTION OF PENNANT HILLS ROAD
AND NORTH ROCKS ROAD, CARLINGFORD, NSW

title: SITE BOUNDARY AND SAMPLE LOCATIONS

project no: 754-SYDEN279944-L01 | figure no: FIGURE 2 | rev: A

PLOT DATE: 22/12/2020 1:04:42 PM DWG FILE: \\TTS779FS1.TT.LOCAL\DATA\1. PROJECTS\1. SYDENENV\2020\754-SYDEN279944 TFNSW PENNANT HILLS ROAD CARLINGFORD\12. CAD\754-SYDEN279944-L01.DWG

Attachment C: Photographs

Photo 1. 20.11.2020 Looking North along Pennant Hills Road (western side).

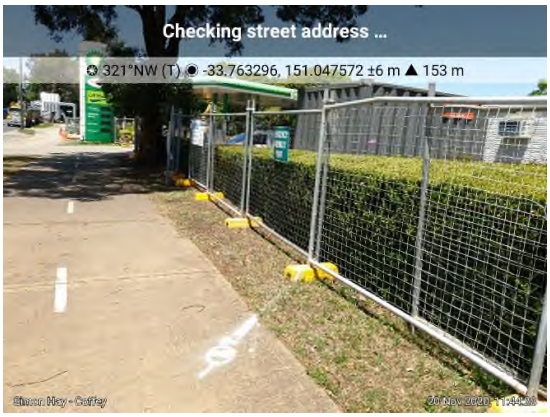


Photo 2. 20.11.2020 Looking south along Pennant Hills Road (western side) with BP service station in background.

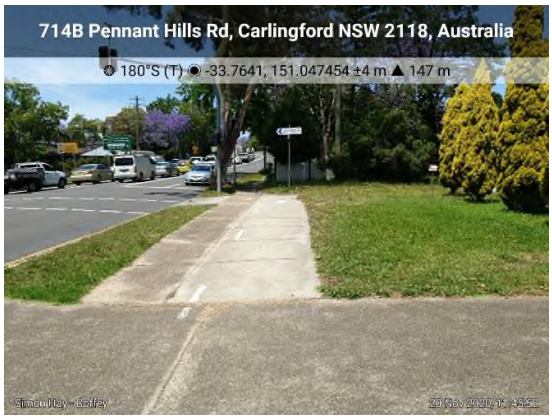


Photo 3. 20.11.2020 Looking south along Pennant Hills Road (western side) at approximate location of GBH08.

Photo 4. 20.11.2020 Looking east down North Rock Road (northern side) adjacent BH16.

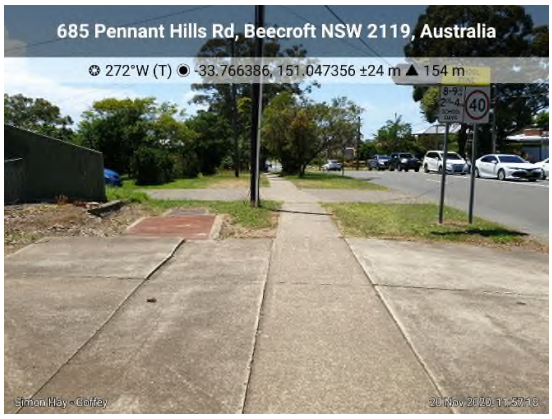


Photo 5. 20.11.2020 Looking east down North Rock Road (northern side) adjacent BH12.

Photo 6. 20.11.2020 Looking east down North Rock Road (northern side) near intersection of Roselea Way.

Photo 7. 20.11.2020 Looking south along Pennant Hills Road (eastern side) near BH14.

Photo 8. 20.11.2020 Looking south along Pennant Hills Road (eastern side).

Photo 9. 20.11.2020 Looking north along Pennant Hills Road (eastern side) north of BH06.

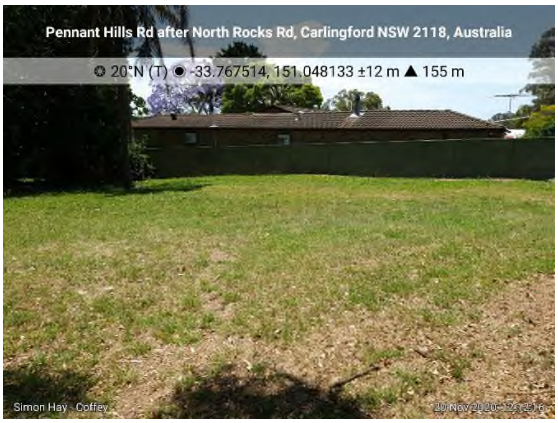


Photo 10. 20.11.2020 Looking north-east across proposed construction compound area near BH11A.

Photo 11. 20.11.2020 Looking north across proposed construction compound area near BH10.

Photo 12. 20.11.2020 Looking south across proposed construction compound area near BH9with arrow denoting approximate location of ACM1.

Photo 13. 20.11.2020 Looking down at sample ACM01.

Photo 14. 20.11.2020 Close-up of ACM01.

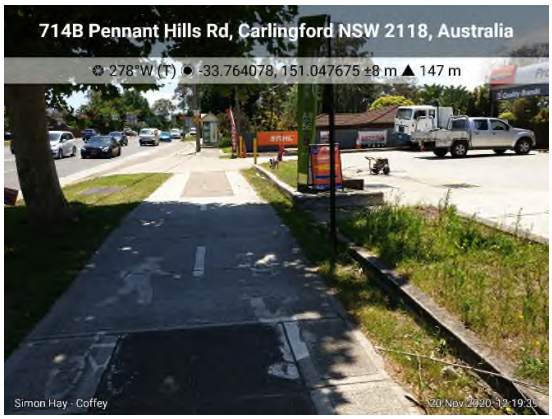


Photo 15. 20.11.2020 Looking north along Pennant Hills Road near BH03.

Photo 16. 23.11.2020 Looking west at BH12 located on Pennant Hills Road prior to sampling (borehole progressed in grass verge).

Photo 17. 01.12.2020 Close-up of BH10 with silty sand topsoil.

Photo 18. 01.12.2020 Looking at Location BH08.

Photo 19. 02.12.2020 Looking south-east from Pennant Hills Road to sample location GBH02 on North Rocks Road.

Photo 20. 02.12.2020 Looking south-east at sample location GBH08.

Photo 21. 02.12.2020 Close-up of soil in auger at GBH08 with gravelly sand fill overlying red residual clay.

Photo 22. 09.12.2020 Looking south-west at GBH03.

Photo 23. 09.12.2020 Looking north at GBH04.

Photo 24. 09.12.2020 Close-up of material in auger at GBH04, with road base comprised of large angular gravels overlying highly weather white sandstone.

Attachment D: PID Calibration Certificate

PID Calibration Certificate

Instrument **PhoCheck Tiger**
Serial No. **T-115201**

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

Post sampling results

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

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		100ppm Isobutylene	NATA	SY245		100.4ppm

Calibrated by: **Timothy Potter**

Calibration date: **30/11/2020**

Next calibration due: **30/12/2020**

PID Calibration Certificate

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

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6eV			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm	N/A	N/A
Software	Version	✓				
Data logger	Operation					
Download	Operation	✓				
Other tests:						

Certificate of Calibration

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

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		100ppm Isobutylene	NATA	SY245		99.8ppm

Calibrated by: **Lauren Tompkins**

Calibration date: **9/12/2020**

Next calibration due: **7/06/2021**

Attachment E: Tables

		Asbestos	Heavy Metal										Inorganic	OCP																									
		Asbestos	Arsenic	Cadmium	Chromium	Copper	Lead	Lead TCLP	Mercury	Nickel	Nickel TCLP	Zinc	Moisture Content (dried @ 103°C)	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene					
		g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/L	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
PQL		0.1	2	0.4	5	5	5	0.01	0.1	5	0.01	5	1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05					
CT1 NSW 2014 General Solid Waste (No Leaching)			100	20	100		100		4	40																													
CT2 NSW 2014 Restricted Solid Waste (No Leaching)			400	80	400		400		16	160																													
SCC1 NSW 2014 General Solid Waste (leached)			500	100	1900		1500	5	50	1050	2																												
SCC2 NSW 2014 Restricted Solid Waste (leached)			2000	400	7600		6000	20	200	4200	8																												
Field_ID	**Sample_Depth_Range**	**Sampled_Date-Time**	**Matrix_Description**																																					
BH01_0.0-0.1	0-0.1	23-11-20	Fill	NAD	8.2	<0.4	22	39	30	-	<0.1	12	-	240	22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH01_0.5-0.6	0.5-0.6	23-11-20	Fill	-	6.8	<0.4	15	14	29	-	<0.1	<5	-	52	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH02_0.0-0.1	0-0.1	23-11-20	Fill	-	7.8	<0.4	14	19	130	-	<0.1	6.9	-	100	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
GBH02_0.4-0.6	0.4-0.6	02-12-20	Fill (roadbase fines)	-	<2	<0.4	20	82	<5	-	<0.1	76	0.17	74	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH03_0.0-0.1	0-0.1	23-11-20	Fill	NAD	4.3	<0.4	27	38	110	-	<0.1	32	-	250	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH03_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	11	<0.4	19	26	41	-	<0.1	10	-	69	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH04_0.0-0.1	0-0.1	23-11-20	Fill	NAD	8.3	<0.4	21	50	180	0.04	<0.1	8.7	-	94	22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH04_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	11	<0.4	27	14	23	-	<0.1	5.3	-	23	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH05_0.0-0.1	0-0.1	23-11-20	Fill	NAD	5.5	0.4	31	77	510	0.19	<0.1	25	-	320	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH06_0.0-0.1	0-0.1	23-11-20	Fill	-	7.3	<0.4	24	91	620	0.45	<0.1	13	-	210	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
GBH06_0.0-0.1	0-0.1	02-12-20	Fill	NAD	81	<0.4	86	76	470	0.22	<0.1	11	-	180	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH07_0.0-0.1	0-0.1	24-11-20	Fill	NAD	9.5	<0.4	20	23	190	-	<0.1	7	-	100	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH07_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	12	<0.4	22	5.1	17	-	<0.1	<5	-	<5	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH08_0.0-0.1	0-0.1	23-11-20	Fill	NAD	8.1	<0.4	22	18	150	-	0.1	10	-	66	20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
GBH08_0.0-0.1	0-0.1	02-12-20	Fill	NAD	5.1	<0.4	16	45	55	-	<0.1	9	-	250	44	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					
GBH08_0.8-1.0	0.8-1	02-12-20	Fill	-	11	<0.4	24	18	51	-	<0.1	6.3	-	45	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH12_0.0-0.1	0-0.1	24-11-20	Fill	NAD	3.9	<0.4	51	63	630	0.63	<0.1	96	0.05	450	5.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH12_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	21	<0.4	28	17	33	-	<0.1	<5	-	23	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH13_0.0-0.1	0-0.1	24-11-20	Fill	-	7.3	<0.4	16	47	470	0.42	<0.1	7	-	200	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH13_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	5.4	<0.4	9.2	15	100	-	<0.1	7.5	-	96	8.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH14_0.0-0.1	0-0.1	24-11-20	Fill	NAD	11	<0.4	17	31	73	-	<0.1	6.5	-	78	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH14_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	6.7	<0.4	12	16	17	-	<0.1	<5	-	21	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH15_0.0-0.1	0-0.1	24-11-20	Fill	NAD	3.6	<0.4	35	38	180	-	<0.1	33	-	130	9.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH16_0.0-0.1	0-0.1	25-11-20	Fill	NAD	11	0.6	17	63	120	-	<0.1	12	-	210	19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH16_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	14	<0.4	18	36	43	-	<0.1	<5	-	35	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH17_0.0-0.1	0-0.1	25-11-20	Fill	NAD	3	<0.4	12	24	26	-	<0.1	8	-	110	20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH18_0.0-0.1	0-0.1	25-11-20	Fill	-	6.6	<0.4	31	84	180	0.08	<0.1	17	-	430	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH18_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	8.3	<0.4	15	10	11	-	<0.1	<5	-	60	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH19_0.0-0.1	0-0.1	25-11-20	Fill	-	4.6	0.5	36	79	150	-	<0.1	27	-	420	11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH20_0.0-0.1	0-0.1	25-11-20	Fill	-	4.9	<0.4	21	25	84	-	<0.1	23	-	94	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH21_0.0-0.1	0-0.1	25-11-20	Fill	-	9.7	<0.4	39	25	36	-	<0.1	7.4	-	110	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH21_0.5-0.6	0.5-0.6	25-11-20	Natural (silty clay)	-	11	<0.4	21	12	21	-	<0.1	<5	-	130	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH22_0.0-0.1	0-0.1	25-11-20	Fill	NAD	7.7	0.4	43	85	57	-	0.2	25	-	480	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH23_0.0-0.1	0-0.1	25-11-20	Fill	NAD	4.1	<0.4	7.2	29	24	-	<0.1	<5	-	62	7.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
GBH03_0.3-0.4	0.3-0.4	09-12-20	Natural (sandstone fines)	-	<2	<0.4	7.4	11	9.1	-	<0.1	<5	-	13	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
GBH04_0.6-0.7	0.6-0.7	09-12-20	Natural (sandstone fines)	-	2	<0.4	8.8	<5	11	-	<0.1	<5	-	22	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
GBH05_0.2-0.3	0.2-0.3	09-12-20	Natural (sandstone fines)	-	3.2	<0.4	9.8	<5	16	-	<0.1	<5	-	24	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
QC1	BH11A	02-12-20	Fill	-	12	<0.4	18	20	340	-	<0.1	6.2	-	180	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
QC2	BH11A	02-12-20	Fill	-	7	<1	10	14	198	-	<0.1	3	-	83		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH09_0.0_0.1	0.1	01-12-20	Fill	-	8.7	<0.4	21	47	410	0.03	0.1	11	-	190	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					
BH09_0.5_0.6	0.6	01-12-20	Fill	-	18	<0.4	31	10	16	-	<0.1	<5	-	11	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH10_0.0_0.1	0.1	01-12-20	Fill	NAD	2.3	<0.4	24	16	32	-	<0.1	18	-	51	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
BH11A_0.0_0.1		02-12-20	Fill	-	11	<0.4	18	17	260	0.07	<0.1	5	-	140	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

				OPP																																						
				Methoxychlor	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Parathion	Phorate	Pirimiphos-methyl	Pyrazophos	Ronnel	Terbufos	Trichloronate
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PQL				0.2	0.1	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
CT1 NSW 2014 General Solid Waste (No Leaching)									4																																
CT2 NSW 2014 Restricted Solid Waste (No Leaching)									16																																
SCC1 NSW 2014 General Solid Waste (leached)									7.5																																
SCC2 NSW 2014 Restricted Solid Waste (leached)									30																																
Field_ID	**Sample_Depth_Range**	**Sampled_Date-Time**	**Matrix_Description**																																						
BH01_0.0-0.1	0-0.1	23-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH01_0.5-0.6	0.5-0.6	23-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GBH02_0.4-0.6	0.4-0.6	02-12-20	Fill (roadbase fines)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04_0.0-0.1	0-0.1	23-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH04_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GBH06_0.0-0.1	0-0.1	02-12-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.0-0.1	0-0.1	24-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08_0.0-0.1	0-0.1	23-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
GBH08_0.0-0.1	0-0.1	02-12-20	Fill	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GBH08_0.8-1.0	0.8-1	02-12-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12_0.0-0.1	0-0.1	24-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH12_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.0-0.1	0-0.1	24-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.0-0.1	0-0.1	24-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15_0.0-0.1	0-0.1	24-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH16_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH16_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH18_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH20_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21_0.5-0.6	0.5-0.6	25-11-20	Natural (silty clay)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
GBH03_0.3-0.4	0.3-0.4	09-12-20	Natural (sandstone fines)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GBH04_0.6-0.7	0.6-0.7	09-12-20	Natural (sandstone fines)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GBH05_0.2-0.3	0.2-0.3	09-12-20	Natural (sandstone fines)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC1	BH11A	02-12-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC2	BH11A	02-12-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09_0.0_0.1	0.1	01-12-20	Fill	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH09_0.5_0.6	0.6	01-12-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10_0.0_0.1	0.1	01-12-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11A_0.0_0.1		02-12-20	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

			Organic									PAH																											
			Tetrachlorvinphos	Tokuthion	Naphthalene	F2-NAPHTHALENE	C6 - C9	C10 - C40 (Sum of total)	C6-C10 less BTEX (F1)	C10-C16	C16-C34	C34-C40	C6 - C10	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(a)pyrene TCLP	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Benzo(a)pyrene TEQ (upper bound) *	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Benzo(b+j)fluoranthene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAHs	Total PAH TCLP	Arochlor 1221	Aroclor 1016
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg
PQL			0.2	0.2	0.5	50	20	100	20	50	100	100	20	0.5	0.5	0.5	0.5	0.5	0.001	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.001	0.1	0.5
CT1 NSW 2014 General Solid Waste (No Leaching)							650											0.8																200			
CT2 NSW 2014 Restricted Solid Waste (No Leaching)							2600											3.2																800			
SCC1 NSW 2014 General Solid Waste (leached)							650											10	0.04															200	200		
SCC2 NSW 2014 Restricted Solid Waste (leached)							2600											23	0.16															800	800		
Field_ID	**Sample_Depth_Range**	**Sampled_Date-Time**	**Matrix_Description**																																			
BH01_0.0-0.1	0-0.1	23-11-20	Fill	<0.2	<0.2	<0.5	62	<20	542	<20	62	330	150	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
BH01_0.5-0.6	0.5-0.6	23-11-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH02_0.0-0.1	0-0.1	23-11-20	Fill	-	-	<0.5	130	<20	1540	<20	130	1000	410	<20	<0.5	<0.5	<0.5	<0.5	0.6	-	0.6	1	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	-	-
GBH02_0.4-0.6	0.4-0.6	02-12-20	Fill (roadbase fines)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH03_0.0-0.1	0-0.1	23-11-20	Fill	-	-	<0.5	54	<20	534	<20	54	310	170	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH03_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH04_0.0-0.1	0-0.1	23-11-20	Fill	<0.2	<0.2	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
BH04_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH05_0.0-0.1	0-0.1	23-11-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	0.6	0.8	-	<2	<2	<2	0.6	0.5	0.7	<2	<0.5	1	<0.5	<0.5	<0.5	<0.5	1.1	5.3	-	-	-
BH06_0.0-0.1	0-0.1	23-11-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<1	<1	1.3	<0.5	<0.5	<0.5	<1	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.1	-	-	-
GBH06_0.0-0.1	0-0.1	02-12-20	Fill	-	-	-	<50	<20	905	<20	75	540	290	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH07_0.0-0.1	0-0.1	24-11-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH07_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH08_0.0-0.1	0-0.1	23-11-20	Fill	<0.2	<0.2	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
GBH08_0.0-0.1	0-0.1	02-12-20	Fill	<0.5	<0.5	<0.5	2000	<20	11,200	<20	2000	7800	1400	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<1	<1
GBH08_0.8-1.0	0.8-1	02-12-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH12_0.0-0.1	0-0.1	24-11-20	Fill	<0.2	<0.2	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
BH12_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH13_0.0-0.1	0-0.1	24-11-20	Fill	-	-	<0.5	<500	<20	<1000	<20	<500	<1000	<1000	<20	<0.5	5.5	1.3	1.9	4.6	<0.001	6	6.2	6.5	2.8	2.3	2.4	<5	0.7	1.7	0.6	2.1	<0.5	<0.5	2.5	28.4	-	-	-
BH13_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	<5	-	<200	-	<200	<2500	5800	<5000	<200	0.5	28	5.1	5.1	90	<0.001*	-	-	-	61	78	38	63	18	46	<0.5	55	<5	3.2	67	557.9	0.002*	-	-
BH14_0.0-0.1	0-0.1	24-11-20	Fill	-	-	<0.5	<50	<20	140	<20	<50	140	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH14_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH15_0.0-0.1	0-0.1	24-11-20	Fill	<0.2	<0.2	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
BH16_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.2	<0.5	<50	<20	120	<20	<50	120	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
BH16_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH17_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.2	<0.5	<50	<20	190	<20	<50	190	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
BH18_0.0-0.1	0-0.1	25-11-20	Fill	-	-	<0.5	<50	<20	170	<20	<50	170	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH18_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH19_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.2	<0.5	82	<20	652	<20	82	470	100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	0.5	1.2	-	<0.1	<0.5
BH20_0.0-0.1	0-0.1	25-11-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH21_0.0-0.1	0-0.1	25-11-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH21_0.5-0.6	0.5-0.6	25-11-20	Natural (silty clay)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH22_0.0-0.1	0-0.1	25-11-20	Fill	-	-	<0.5	75	<20	535	<20	75	460	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH23_0.0-0.1	0-0.1	25-11-20	Fill	<0.2	<0.2	<0.5	<50	<20	130	<20	<50	130	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.1	<0.5
GBH03_0.3-0.4	0.3-0.4	09-12-20	Natural (sandstone fines)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
GBH04_0.6-0.7	0.6-0.7	09-12-20	Natural (sandstone fines)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
GBH05_0.2-0.3	0.2-0.3	09-12-20	Natural (sandstone fines)	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
QC1	BH11A	02-12-20	Fill	-	-	<0.5	<250	<20	<500	<20	<250	<500	<500	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
QC2	BH11A	02-12-20	Fill	-	-	<0.5	<50	<10	<50	<10	<0	<100	<100	<10	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH09_0.0_0.1	0.1	01-12-20	Fill	<0.2	<0.2	<0.5	<50	<20	150	<20	<50	150	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	0.7	-	<0.1	<0.5
BH09_0.5_0.6	0.6	01-12-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH10_0.0_0.1	0.1	01-12-20	Fill	-	-	<0.5	<50	<20	<100	<20	<50	<100	<100	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-
BH11A_0.0_0.1		02-12-20	Fill	-	-	<0.5	<250	<20	<500	<20	<250	<500	<500	<20	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-

							PCB					TPH				TPH Following Silica Gel Clean-up							Volatile					
							Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (Sum of total)	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	C10-C16	C16-C34	C34-C40	C10 - C36 (Sum of total)	C10 - C14	C15 - C28	C29 - C36	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
PQL							0.5	0.5	0.5	0.5	0.5	0.5	20	50	50	50	50	100	100	50	50	100	100	0.1	0.1	0.1	0.2	0.1	0.3
CT1 NSW 2014 General Solid Waste (No Leaching)												50				10000								10	600	288			1000
CT2 NSW 2014 Restricted Solid Waste (No Leaching)												50				40000								40	2400	1152			4000
SCC1 NSW 2014 General Solid Waste (leached)												50				10000								18	1080	518			1800
SCC2 NSW 2014 Restricted Solid Waste (leached)												50				40000								72	4320	2073			7200
Field_ID	**Sample_Depth_Range**	**Sampled_Date-Time**	**Matrix_Description**																										
BH01_0.0-0.1	0-0.1	23-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	46	210	220	610	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH01_0.5-0.6	0.5-0.6	23-11-20	Fill	-	-	-	-	-	-	<20	54	<50	54	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH02_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	120	550	680	1350	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
GBH02_0.4-0.6	0.4-0.6	02-12-20	Fill (roadbase fines)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH03_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	45	190	210	445	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH03_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH04_0.0-0.1	0-0.1	23-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH04_0.5-0.6	0.5-0.6	23-11-20	Natural (residual clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH05_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH06_0.0-0.1	0-0.1	23-11-20	Fill	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
GBH06_0.0-0.1	0-0.1	02-12-20	Fill	-	-	-	-	-	-	68	280	360	708	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH07_0.0-0.1	0-0.1	24-11-20	Fill	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH07_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH08_0.0-0.1	0-0.1	23-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
GBH08_0.0-0.1	0-0.1	02-12-20	Fill	<1	<1	<1	<1	<1	<1	700	4800	4400	9900	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
GBH08_0.8-1.0	0.8-1	02-12-20	Fill	-	-	-	-	-	-	<20	52	<50	52	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH12_0.0-0.1	0-0.1	24-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH12_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH13_0.0-0.1	0-0.1	24-11-20	Fill	-	-	-	-	-	-	<200	<500	<500	<500	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH13_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	<1000	3700	<2500	<50	88*	2100*	200*	2350*	<50*	1500*	850*	<1	<1	<1	<2	<1	<3
BH14_0.0-0.1	0-0.1	24-11-20	Fill	-	-	-	-	-	-	<20	86	95	181	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH14_0.5-0.6	0.5-0.6	24-11-20	Natural (residual clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH15_0.0-0.1	0-0.1	24-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	54	69	123	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH16_0.0-0.1	0-0.1	25-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	61	83	144	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH16_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH17_0.0-0.1	0-0.1	25-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	25	140	110	275	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH18_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	25	99	110	234	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH18_0.5-0.6	0.5-0.6	25-11-20	Natural (residual clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH19_0.0-0.1	0-0.1	25-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	57	250	330	637	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH20_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH21_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH21_0.5-0.6	0.5-0.6	25-11-20	Natural (silty clay)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH22_0.0-0.1	0-0.1	25-11-20	Fill	-	-	-	-	-	-	57	270	300	627	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH23_0.0-0.1	0-0.1	25-11-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	81	84	165	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
GBH03_0.3-0.4	0.3-0.4	09-12-20	Natural (sandstone fines)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
GBH04_0.6-0.7	0.6-0.7	09-12-20	Natural (sandstone fines)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
GBH05_0.2-0.3	0.2-0.3	09-12-20	Natural (sandstone fines)	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
QC1	BH11A	02-12-20	Fill	-	-	-	-	-	-	<100	<250	<250	<250	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
QC2	BH11A	02-12-20	Fill	-	-	-	-	-	-	<50	<100	<100	<50	-	-	-	-	-	-	-	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
BH09_0.0_0.1	0.1	01-12-20	Fill	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	73	95	168	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH09_0.5_0.6	0.6	01-12-20	Fill	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH10_0.0_0.1	0.1	01-12-20	Fill	-	-	-	-	-	-	<20	<50	<50	<50	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3
BH11A_0.0_0.1		02-12-20	Fill	-	-	-	-	-	-	<100	<250	<250	<250	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3

SDG	04-Dec-20	04-Dec-20		04-Dec-20	Interlab_D	
Field ID	TP11A	QC1	RPD	TP11A	QC2	RPD
Sampled Date/Time	02-12-20	02-12-20		02-12-20	02-12-20	

Method_T	ChemNam	Units	EQL						
Inorganic	Moisture C	%	1	21.0	27.0	25	21.0		
Heavy Met	Arsenic	mg/kg	2 (Primary): 5 (Interlab)	11.0	12.0	9	11.0	7.0	44
	Cadmium	mg/kg	0.4 (Primary): 1 (Interlab	<0.4	<0.4	0	<0.4	<1.0	0
	Chromium	mg/kg	5 (Primary): 2 (Interlab)	18.0	18.0	0	18.0	10.0	57
	Copper	mg/kg	5	17.0	20.0	16	17.0	14.0	19
	Lead	mg/kg	5	260.0	340.0	27	260.0	198.0	27
	Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	5 (Primary): 2 (Interlab)	5.0	6.2	21	5.0	3.0	50
	Zinc	mg/kg	5	140.0	180.0	25	**140.0**	**83.0**	**51**
al									
PAH	Acenaphth	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Acenaphth	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)an	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)py	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)py	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(a)py	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0
	Benzo(a)py	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0
	Benzo(g,h,	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(k)flu	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo[b+j]	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Dibenz(a,h	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Fluoranthe	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Indeno(1,2	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Naphthaler	mg/kg	0.5 (Primary): 1 (Interlab	<0.5	<0.5	0	<0.5	<0.5	0
	Phenanthre	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
	Total PAHs	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Organic	C10 - C40	mg/kg	100 (Primary): 50 (Interl	<500.0	<500.0	0	<500.0	<50.0	0
	C10-C16	mg/kg	50	<250.0	<250.0	0	<250.0	<50.0	0
	C16-C34	mg/kg	100	<500.0	<500.0	0	<500.0	<100.0	0
	C34-C40	mg/kg	100	<500.0	<500.0	0	<500.0	<100.0	0
TPH	C10 - C14	mg/kg	20 (Primary): 50 (Interla	<100.0	<100.0	0	<100.0	<50.0	0
	C15 - C28	mg/kg	50 (Primary): 100 (Interl	<250.0	<250.0	0	<250.0	<100.0	0
	C29 - C36	mg/kg	50 (Primary): 100 (Interl	<250.0	<250.0	0	<250.0	<100.0	0
	C10 - C36	mg/kg	50	<250.0	<250.0	0	<250.0	<50.0	0

*RPDs have only been considered where a concentration is greater than 0 times the EQL.
**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 2000 (0-10 x EQL); 50 (10-20 x EQL); 30
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in th

Lab Report Number	762036	763264	762036	762036
Field ID	R1	R2	TRIP BLANK	Trip_SPIKE
Sampled_Date/Time	01-12-20	09-12-20	01-12-20	01-12-20
Sample Type	Rinsate	Rinsate	Trip_B	Trip_

Method_Type	ChemName	Units	EQL				
Heavy Metal	Arsenic	mg/l	0.001	<0.001	<0.001		
	Cadmium	mg/l	0.0002	<0.0002	<0.0002		
	Chromium	mg/l	0.001	<0.001	<0.001		
	Copper	mg/l	0.001	<0.001	<0.001		
	Lead	mg/l	0.001	<0.001	<0.001		
	Mercury	mg/l	0.0001	<0.0001	<0.0001		
	Nickel	mg/l	0.001	<0.001	<0.001		
	Zinc	mg/l	0.005	<0.005	<0.005		
Organic	Naphthalene	µg/l	10	<10	<10	<10	97%
	F2-NAPHTHALENE	mg/l	0.05	<0.1	<0.05		
	C6 - C9	µg/l	20	<20	<20	<20	
	C10 - C40 (Sum of total)	µg/l	100	<100	<100		
	C6-C10 less BTEX (F1)	mg/l	0.02	<0.02	<0.02	<0.02	
	C10-C16	mg/l	0.05	<0.1	<0.05		
	C16-C34	mg/l	0.1	<0.1	<0.1		
	C34-C40	mg/l	0.1	<0.1	<0.1		
	C6 - C10	mg/l	0.02	<0.02	<0.02	<0.02	
PAH	Acenaphthene	µg/l	1	<1	<1		
	Acenaphthylene	µg/l	1	<1	<1		
	Anthracene	µg/l	1	<1	<1		
	Benzo(a)anthracene	µg/l	1	<1	<1		
	Benzo(a)pyrene	µg/l	1	<1	<1		
	Benzo(g,h,i)perylene	µg/l	1	<1	<1		
	Benzo(k)fluoranthene	µg/l	1	<1	<1		
	Chrysene	µg/l	1	<1	<1		
	Benzo[b+j]fluoranthene	mg/l	0.001	<0.001	<0.001		
	Dibenz(a,h)anthracene	µg/l	1	<1	<1		
	Fluoranthene	µg/l	1	<1	<1		
	Fluorene	µg/l	1	<1	<1		
	Indeno(1,2,3-c,d)pyrene	µg/l	1	<1	<1		
	Naphthalene	µg/l	1	<1	<1		
	Phenanthrene	µg/l	1	<1	<1		
	Pyrene	µg/l	1	<1	<1		
	Total PAHs	µg/l	1	<1	<1		
TPH	C10 - C14	µg/l	50	<50	<50		
	C15 - C28	µg/l	100	<100	<100		
	C29 - C36	µg/l	100	<100	<100		
	C10 - C36 (Sum of total)	µg/l	100	<100	<100		
	TRH - C6 - C9						75%
Volatile	Benzene	µg/l	1	<1	<1	<1	110%
	Ethylbenzene	µg/l	1	<1	<1	<1	93%
	Toluene	µg/l	1	<1	<1	<1	97%
	Xylene (m & p)	µg/l	2	<2	<2	<2	-
	Xylene (o)	µg/l	1	<1	<1	<1	-
	Xylene Total	µg/l	3	<3	<3	<3	92%

Attachment F: Laboratory Reports

Bulk Identification Report

Job No:	754-SYDEN279944 Pennant Hills Road 26112020
Client:	Transport for New South Wales
Client Address:	Level 9, 10-14 Smith Street, Parramatta NSW 2000
Contact:	Maria Doumit
E-mail:	maria.doumit@transport.nsw.gov.au
Date Sampled:	20/11/2020
Date Printed:	26/11/2020
Sampled By:	Simon Hay
Site:	Pennant Hills Road, Carlingford

Accredited for compliance with ISO/IEC 17025 - Testing
Accreditation No:2220
Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Coffey Services Australia Pty Ltd (Coffey) does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Coffey and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Coffey does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Coffey or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

Test Method: **Asbestos in Bulk Samples and Non-homogenous Material**
Coffey analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Coffey's NATA approved SOP WILAB1 sample retention periods are set at 1 month (no asbestos detected) and 3 months (asbestos detected).

Total Samples: **1**

Matthew Tang
Approved Identifier

Matthew Tang
Approved Signatory

Sample No.	Location & Description	Sample Size	Results
ACM1	Vacant lot, north-east corner of intersection of Pennant Hills Road and North Rocks Road. Fibre Cement Fragment identified on surface at base of large southern/central tree - Grey compressed fibre cement sheet material	~ 34 x 31 x 5 mm	**Chrysotile (white asbestos) detected**

Reference No. _____

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

coffey
A TETRA TECH COMPANY

Consigning Office:	Coffey Services Australia Pty Ltd - Chatswood				
Report Results to:	Simon Hay	Mobile:	0424 703 009	Email:	Simon.Hay@coffey.com
Invoices to:	Simon Hay	Phone:	0424 703 009	Email:	0424 703 009

Project No:	754-SYDEN279944	Task No:	Fieldwork
Project Name:	Pennant Hills Road	Laboratory:	Eurofins
Sampler's Name:	Timothy Masudi	Project Manager:	Simon Hay

Special Instructions:

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Suite B7	Suite B15	Asbestos 50 g		Hold								NOTES
	BH01_0.0-0.1	23.11.20	9:00 PM	Soil	zip bag and Jar	5 day	X	X	x										
	BH01_0.5-0.6	23.11.20	9:25 PM	Soil	zip bag and Jar	5 day	X												
	BH01_0.9-1.0	23.11.20	9:55 PM	Soil	zip bag and Jar	5 day					X								
	BH02_0.0-0.1	23.11.20	10:25 PM	Soil	zip bag and Jar	5 day	X												
	BH03_0.0-0.1	23.11.20	10:45 AM	Soil	zip bag and Jar	5 day	X		X										
	BH03_0.5-0.6	23.11.20	11:15 PM	Soil	zip bag and Jar	5 day	X												
	BH03_0.9-1.0	23.11.20	11:40 PM	Soil	zip bag and Jar	5 day					X								
	BH04_0.0-0.1	23.11.20	12:00 AM	Soil	zip bag and Jar	5 day	X	X	X										
	BH04_0.5-0.6	23.11.20	12:35 AM	Soil	zip bag and Jar	5 day	X												
	BH04_0.9-1.0	23.11.20	1:10 AM	Soil	zip bag and Jar	5 day													
	BH05_0.0-0.1	23.11.20	1:25 AM	Soil	zip bag and Jar	5 day	X		X										
	BH05_0.5-0.6	23.11.20	1:50 AM	Soil	zip bag and Jar	5 day					X								
	BH05_0.9-1.0	23.11.20	2:10 AM	Soil	zip bag and Jar	5 day					X								
	BH06_0.0-0.1	23.11.20	2:30 AM	Soil	zip bag and Jar	5 day	X												
	BH08_0.0-0.1	23.11.20	3:15 AM	Soil	zip bag and Jar	5 day	X	X	X										

Analysis Request Section

RELINQUISHED BY		RECEIVED BY	
Name:	Date:	Name: Grace Tizzell	Date: 27/11
Coffey	Time:	Company: Eurofins	Time: 8:38
Name:	Date: →	Name:	Date:
Company:	Time:	Company:	Time:

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☑
All Documentation is in Proper Order ☑
Samples Received Properly Chilled ☐
Lab. Ref/Batch No. 759675

***Container Type & Preservation Codes:** **P** - Plastic, **G**- Glass Bottle, **J** - Glass Jar, **V**- Vial, **Z** - Ziplock bag, **N** - Nitric Acid Preserved, **C** - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice, **ST** - Sodium Thiosulfate, **NP** - No Preservative

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

coffey
TETRA TECH COMPANY

Consigning Office:	Coffey Services Australia Pty Ltd - Chatswood				
Report Results to:	Simon Hay	Mobile:	0424 703 009	Email:	Simon.Hay@coffey.com
Invoices to:	Simon Hay	Phone:	0424 703 009	Email:	0424 703 009
Project No:	754-SYDEN279944	Task No:	Fieldwork		
Project Name:	Pennant Hills Road	Laboratory:	Eurofins		
Sampler's Name:	Timothy Masudi	Project Manager:	Simon Hay		

Special Instructions:

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Analysis Request Section: Suite B7	Suite B15	Asbestos 50g	Hold								NOTES
	BH07_0.0-0.1	24.11.20	8:40 PM	Soil	J & Z	5 day	X		x									
	BH07_0.5-0.6	24.11.20	8:55 PM	Soil	J & Z	5 day	X											
	BH07_0.8-0.9	24.11.20	9:15 PM	Soil	J & Z	5 day				X								
	BH12_0.0-0.1	24.11.20	9:30 PM	Soil	J & Z	5 day	X	X	x									
	BH12_0.5-0.6	24.11.20	9:50 PM	Soil	J & Z	5 day	X											
	BH12_0.9-1.0	24.11.20	10:00 PM	Soil	J & Z	5 day				X								
	BH13_0.0-0.1	24.11.20	10:20 PM	Soil	J & Z	5 day	X											
	BH13_0.5-0.6	24.11.20	10:45 PM	Soil	J & Z	5 day	X											
	BH14_0.0-0.1	24.11.20	10:55 PM	Soil	J & Z	5 day	X		x									
	BH14_0.5-0.6	24.11.20	11:15 PM	Soil	J & Z	5 day	X											
	BH14_0.9-1.0	24.11.20	11:25 PM	Soil	J & Z	5 day				X								
	BH15_0.0-0.1	24.11.20	11:45 PM	Soil	J & Z	5 day	X	X	X									
	BH16_0.0-0.1	25.11.20	12:10 AM	Soil	J & Z	5 day	X	X	x									
	BH16_0.5-0.6	25.11.20	12:25 AM	Soil	J & Z	5 day	X											
	BH16_0.9-1.0	25.11.20	12:45 AM	Soil	J & Z	5 day				X								
	BH17_0.0-0.1	25.11.20	1:05 AM	Soil	J & Z	5 day	X	X	X									
	BH17_0.3-0.4	25.11.20	1:25 AM	Soil	J & Z	5 day				X								
	BH18_0.0-0.1	25.11.20	1:40 AM	Soil	J & Z	5 day	X											
	BH18_0.5-0.6	25.11.20	1:50 AM	Soil	J & Z	5 day	X											
	BH18_0.8-0.9	25.11.20	2:00 AM	Soil	J & Z	5 day				X								
	BH19_0.0-0.1	25.11.20	2:15 AM	Soil	J & Z	5 day	X	X										
	BH19_0.25-0.35	25.11.20	2:25 AM	Soil	J & Z	5 day				X								
	BH20_0.0-0.1	25.11.20	2:35 AM	Soil	J & Z	5 day	X											
	BH21_0.0-0.1	25.11.20	2:45 AM	Soil	J & Z	5 day	X											
	BH21_0.5-0.6	25.11.20	2:50 AM	Soil	J & Z	5 day	X											
	BH21_1.0-1.1	25.11.20	3:05 AM	Soil	J & Z	5 day				X								
	BH22_0.0-0.1	25.11.20	3:20 AM	Soil	J & Z	5 day	X		X									
	BH23_0.0-0.1	25.11.20	3:50 AM	Soil	J & Z	5 day	X	X	X									

RELINQUISHED BY				RECEIVED BY			
Name:	Timothy Masudi	Date:	25/11/2020	Name:	George Tzouvelekis	Date:	27/11
Coffey		Time:		Company:	Eurofins	Time:	8:38
Name:		Date:	→	Name:		Date:	
Company:		Time:		Company:		Time:	

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☑
All Documentation is in Proper Order ☑
Samples Received Properly Chilled ☐

Lab. Ref/Batch No. 759675

***Container Type & Preservation Codes:** **P** - Plastic, **G**- Glass Bottle, **J** - Glass Jar, **V**- Vial, **Z** - Ziplock bag, **N** - Nitric Acid Preserved, **C** - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice, **ST** - Sodium Thiosulfate, **NP** - No Preservative

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Sample Receipt Advice

Company name:	Coffey Environments Pty Ltd NSW
Contact name:	Simon Hay
Project name:	PENNANT HILLS ROAD
Project ID:	754-SYDEN279944
Turnaround time:	5 Day
Date/Time received	Nov 26, 2020 8:38 AM
Eurofins reference	759675

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 17.4 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Simon Hay - simon.hay@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd NSW email address.

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	BH01_0.0-0.1	Nov 23, 2020		Soil	S20-No47967	X		X	X	X
2	BH01_0.5-0.6	Nov 23, 2020		Soil	S20-No47968				X	X
3	BH01_0.9-1.0	Nov 23, 2020		Soil	S20-No47969		X			
4	BH02_0.0-0.1	Nov 23, 2020		Soil	S20-No47970				X	X
5	BH03_0.0-0.1	Nov 23, 2020		Soil	S20-No47971	X			X	X
6	BH03_0.5-0.6	Nov 23, 2020		Soil	S20-No47972				X	X
7	BH03_0.9-1.0	Nov 23, 2020		Soil	S20-No47973		X			
8	BH04_0.0-0.1	Nov 23, 2020		Soil	S20-No47974	X		X	X	X
9	BH04_0.5-0.6	Nov 23, 2020		Soil	S20-No47975				X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
10	BH04_0.9-1.0	Nov 23, 2020		Soil	S20-No47976		X			
11	BH05_0.0-0.1	Nov 23, 2020		Soil	S20-No47977	X			X	X
12	BH05_0.5-0.6	Nov 23, 2020		Soil	S20-No47978		X			
13	BH05_0.9-1.0	Nov 23, 2020		Soil	S20-No47979		X			
14	BH06_0.0-0.1	Nov 23, 2020		Soil	S20-No47980				X	X
15	BH08_0.0-0.1	Nov 23, 2020		Soil	S20-No47981	X		X	X	X
16	R1	Nov 23, 2020		Water	S20-No47982		X			
17	BH07_0.0-0.1	Nov 24, 2020		Soil	S20-No47983	X			X	X
18	BH07_0.5-0.6	Nov 24, 2020		Soil	S20-No47984				X	X
19	BH07_0.8-0.9	Nov 24, 2020		Soil	S20-No47985		X			
20	BH12_0.0-0.1	Nov 24, 2020		Soil	S20-No47986	X		X	X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
21	BH12_0.5-0.6	Nov 24, 2020		Soil	S20-No47987				X	X
22	BH12_0.9-1.0	Nov 24, 2020		Soil	S20-No47988		X			
23	BH13_0.0-0.1	Nov 24, 2020		Soil	S20-No47989				X	X
24	BH13_0.5-0.6	Nov 24, 2020		Soil	S20-No47990				X	X
25	BH14_0.0-0.1	Nov 24, 2020		Soil	S20-No47991	X			X	X
26	BH14_0.5-0.6	Nov 24, 2020		Soil	S20-No47992				X	X
27	BH14_0.9-1.0	Nov 24, 2020		Soil	S20-No47993		X			
28	BH15_0.0-0.1	Nov 24, 2020		Soil	S20-No47994	X		X	X	X
29	BH16_0.0-0.1	Nov 25, 2020		Soil	S20-No47995	X		X	X	X
30	BH16_0.5-0.6	Nov 25, 2020		Soil	S20-No47996				X	X
31	BH16_0.9-1.0	Nov 25, 2020		Soil	S20-No47997		X			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
32	BH17_0.0-0.1	Nov 25, 2020		Soil	S20-No47998	X		X	X	X
33	BH17_0.3-0.4	Nov 25, 2020		Soil	S20-No47999		X			
34	BH18_0.0-0.1	Nov 25, 2020		Soil	S20-No48000				X	X
35	BH18_0.5-0.6	Nov 25, 2020		Soil	S20-No48001				X	X
36	BH18_0.8-0.9	Nov 25, 2020		Soil	S20-No48002		X			
37	BH19_0.0-0.1	Nov 25, 2020		Soil	S20-No48003			X	X	X
38	BH19_0.25-0.35	Nov 25, 2020		Soil	S20-No48004		X			
39	BH20_0.0-0.1	Nov 25, 2020		Soil	S20-No48005				X	X
40	BH21_0.0-0.1	Nov 25, 2020		Soil	S20-No48006				X	X
41	BH21_0.5-0.6	Nov 25, 2020		Soil	S20-No48007				X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
42	BH21_1.0-1.1	Nov 25, 2020		Soil	S20-No48008		X			
43	BH22_0.0-0.1	Nov 25, 2020		Soil	S20-No48009	X			X	X
44	BH23_0.0-0.1	Nov 25, 2020		Soil	S20-No48010	X		X	X	X
Test Counts						13	14	9	30	30

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Simon Hay**

Report **759675-S**
Project name PENNANT HILLS ROAD
Project ID 754-SYDEN279944
Received Date Nov 26, 2020

Client Sample ID			**BH01_0.0-0.1**	**BH01_0.5-0.6**	**BH02_0.0-0.1**	**BH03_0.0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No47967**	**S20-No47968**	**S20-No47970**	**S20-No47971**
Date Sampled			**Nov 23, 2020**	**Nov 23, 2020**	**Nov 23, 2020**	**Nov 23, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	46	< 20	120	45
TRH C15-C28	50	mg/kg	210	54	550	190
TRH C29-C36	50	mg/kg	220	< 50	680	210
TRH C10-C36 (Total)	50	mg/kg	610	62	1800	520
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	%	96	104	106	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	62	< 50	130	54
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	62	< 50	130	54
TRH >C16-C34	100	mg/kg	330	< 100	1000	310
TRH >C34-C40	100	mg/kg	150	< 100	410	170
TRH >C10-C40 (total)*	100	mg/kg	542	< 100	1540	534
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	1.0	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.3	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	0.6	< 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			BH01_0.0-0.1	BH01_0.5-0.6	BH02_0.0-0.1	BH03_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47967	S20-No47968	S20-No47970	S20-No47971
Date Sampled			Nov 23, 2020	Nov 23, 2020	Nov 23, 2020	Nov 23, 2020
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	0.6	0.6	0.8	0.6
2-Fluorobiphenyl (surr.)	1	%	103	96	89	100
p-Terphenyl-d14 (surr.)	1	%	101	105	96	105
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	0.1	mg/kg	< 0.1	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Dibutylchlorendate (surr.)	1	%	123	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	122	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			BH01_0.0-0.1	BH01_0.5-0.6	BH02_0.0-0.1	BH03_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47967	S20-No47968	S20-No47970	S20-No47971
Date Sampled			Nov 23, 2020	Nov 23, 2020	Nov 23, 2020	Nov 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	95	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB*	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	123	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	122	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	8.2	6.8	7.8	4.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	22	15	14	27
Copper	5	mg/kg	39	14	19	38
Lead	5	mg/kg	30	29	130	110
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	< 5	6.9	32
Zinc	5	mg/kg	240	52	100	250
% Moisture	1	%	22	13	25	14

Client Sample ID			BH03_0.5-0.6	BH04_0.0-0.1	BH04_0.5-0.6	[G01]BH05_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47972	S20-No47974	S20-No47975	S20-No47977
Date Sampled			Nov 23, 2020	Nov 23, 2020	Nov 23, 2020	Nov 23, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	59	64	63	57
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	90	94	107	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	< 2
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	< 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	0.6
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.8
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 2
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
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	0.7
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	1.0
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	1.1
Total PAH*	0.5	mg/kg	0.6	0.6	0.6	6.1
2-Fluorobiphenyl (surr.)	1	%	67	97	92	92
p-Terphenyl-d14 (surr.)	1	%	95	94	101	90

Client Sample ID			BH03_0.5-0.6	BH04_0.0-0.1	BH04_0.5-0.6	[G01]BH05_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47972	S20-No47974	S20-No47975	S20-No47977
Date Sampled			Nov 23, 2020	Nov 23, 2020	Nov 23, 2020	Nov 23, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	0.1	mg/kg	-	< 0.1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	-	107	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	120	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	1.5	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			BH03_0.5-0.6	BH04_0.0-0.1	BH04_0.5-0.6	G01 BH05_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47972	S20-No47974	S20-No47975	S20-No47977
Date Sampled			Nov 23, 2020	Nov 23, 2020	Nov 23, 2020	Nov 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	81	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB*	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	107	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	120	-	-
Heavy Metals						
Arsenic	2	mg/kg	11	8.3	11	5.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.4
Chromium	5	mg/kg	19	21	27	31
Copper	5	mg/kg	26	50	14	77
Lead	5	mg/kg	41	180	23	510
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	10	8.7	5.3	25
Zinc	5	mg/kg	69	94	23	320
% Moisture	1	%	15	22	20	13

Client Sample ID			[G01]BH06_0.0-0.1	BH08_0.0-0.1	BH07_0.0-0.1	BH07_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47980	S20-No47981	S20-No47983	S20-No47984
Date Sampled			Nov 23, 2020	Nov 23, 2020	Nov 24, 2020	Nov 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	59	63	62	63
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	103	93	94	100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 1	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	< 1	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.3	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	< 1	< 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	0.6	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	1.3	0.6	0.6	0.6
2-Fluorobiphenyl (surr.)	1	%	89	102	91	94
p-Terphenyl-d14 (surr.)	1	%	93	95	96	109

Client Sample ID			G01 BH06_0.0-0.1	BH08_0.0-0.1	BH07_0.0-0.1	BH07_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47980	S20-No47981	S20-No47983	S20-No47984
Date Sampled			Nov 23, 2020	Nov 23, 2020	Nov 24, 2020	Nov 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	0.1	mg/kg	-	< 0.1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	-	96	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	126	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			G01 BH06_0.0-0.1	BH08_0.0-0.1	BH07_0.0-0.1	BH07_0.5-0.6
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No47980**	**S20-No47981**	**S20-No47983**	**S20-No47984**
Date Sampled			**Nov 23, 2020**	**Nov 23, 2020**	**Nov 24, 2020**	**Nov 24, 2020**
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	78	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB*	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	96	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	126	-	-
Heavy Metals						
Arsenic	2	mg/kg	7.3	8.1	9.5	12
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	24	22	20	22
Copper	5	mg/kg	91	18	23	5.1
Lead	5	mg/kg	620	150	190	17
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	10	7.0	< 5
Zinc	5	mg/kg	210	66	100	< 5
% Moisture	1	%	15	20	19	21

Client Sample ID			BH12_0.0-0.1	BH12_0.5-0.6	[G01]BH13_0.0-0.1	[G01]BH13_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47986	S20-No47987	S20-No47989	S20-No47990
Date Sampled			Nov 24, 2020	Nov 24, 2020	Nov 24, 2020	Nov 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 200
TRH C10-C14	20	mg/kg	< 20	< 20	< 200	< 1000
TRH C15-C28	50	mg/kg	< 50	< 50	< 500	3700
TRH C29-C36	50	mg/kg	< 50	< 50	< 500	< 2500
TRH C10-C36 (Total)	50	mg/kg	53	65	550	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 3
4-Bromofluorobenzene (surr.)	1	%	92	89	99	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 200
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 200
TRH >C10-C16	50	mg/kg	< 50	< 50	< 500	< 2500
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 500	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 1000	5800
TRH >C34-C40	100	mg/kg	< 100	< 100	< 1000	< 5000
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 1000	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	6.0	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	6.2	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	6.5	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	5.5	28
Anthracene	0.5	mg/kg	< 0.5	< 0.5	1.3	5.1
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.9	51
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	4.6	90
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 5	63
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	2.8	61
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	2.3	78
Chrysene	0.5	mg/kg	< 0.5	< 0.5	2.4	38
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	0.7	18
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	1.7	46
Fluorene	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	2.1	55
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	3.2
Pyrene	0.5	mg/kg	< 0.5	< 0.5	2.5	67
Total PAH*	0.5	mg/kg	0.5	0.7	31	< 0.5
2-Fluorobiphenyl (surr.)	1	%	97	89	95	104
p-Terphenyl-d14 (surr.)	1	%	86	101	94	108

Client Sample ID			BH12_0.0-0.1	BH12_0.5-0.6	[G01]BH13_0.0-0.1	[G01]BH13_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47986	S20-No47987	S20-No47989	S20-No47990
Date Sampled			Nov 24, 2020	Nov 24, 2020	Nov 24, 2020	Nov 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	0.1	mg/kg	< 0.1	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Dibutylchlorendate (surr.)	1	%	86	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	116	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			BH12_0.0-0.1	BH12_0.5-0.6	[G01]BH13_0.0-0.1	[G01]BH13_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47986	S20-No47987	S20-No47989	S20-No47990
Date Sampled			Nov 24, 2020	Nov 24, 2020	Nov 24, 2020	Nov 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	76	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB*	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	86	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	116	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	3.9	21	7.3	5.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	51	28	16	9.2
Copper	5	mg/kg	63	17	47	15
Lead	5	mg/kg	630	33	470	100
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	96	< 5	7.0	7.5
Zinc	5	mg/kg	450	23	200	96
% Moisture	1	%	5.7	23	9.2	8.1

Client Sample ID			BH14_0.0-0.1	BH14_0.5-0.6	BH15_0.0-0.1	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47991	S20-No47992	S20-No47994	S20-No47995
Date Sampled			Nov 24, 2020	Nov 24, 2020	Nov 24, 2020	Nov 25, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	86	< 50	54	61
TRH C29-C36	50	mg/kg	95	< 50	69	83
TRH C10-C36 (Total)	50	mg/kg	210	58	140	180
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	%	105	100	101	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	140	< 100	< 100	120
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	140	< 100	< 100	120
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	0.6	0.6	0.6	0.6
2-Fluorobiphenyl (surr.)	1	%	85	85	92	98
p-Terphenyl-d14 (surr.)	1	%	90	91	88	86

Client Sample ID			BH14_0.0-0.1	BH14_0.5-0.6	BH15_0.0-0.1	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47991	S20-No47992	S20-No47994	S20-No47995
Date Sampled			Nov 24, 2020	Nov 24, 2020	Nov 24, 2020	Nov 25, 2020
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-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	-	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	-	-	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	-	65	84
Tetrachloro-m-xylene (surr.)	1	%	-	-	106	112
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			BH14_0.0-0.1	BH14_0.5-0.6	BH15_0.0-0.1	BH16_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47991	S20-No47992	S20-No47994	S20-No47995
Date Sampled			Nov 24, 2020	Nov 24, 2020	Nov 24, 2020	Nov 25, 2020
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	%	-	-	72	74
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	-	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	65	84
Tetrachloro-m-xylene (surr.)	1	%	-	-	106	112
Heavy Metals						
Arsenic	2	mg/kg	11	6.7	3.6	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.6
Chromium	5	mg/kg	17	12	35	17
Copper	5	mg/kg	31	16	38	63
Lead	5	mg/kg	73	17	180	120
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.5	< 5	33	12
Zinc	5	mg/kg	78	21	130	210
% Moisture	1	%	12	14	9.5	19

Client Sample ID			BH16_0.5-0.6	BH17_0.0-0.1	BH18_0.0-0.1	BH18_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47996	S20-No47998	S20-No48000	S20-No48001
Date Sampled			Nov 25, 2020	Nov 25, 2020	Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	25	25	< 20
TRH C15-C28	50	mg/kg	< 50	140	99	< 50
TRH C29-C36	50	mg/kg	< 50	110	110	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	275	234	< 50

Client Sample ID			BH16_0.5-0.6	BH17_0.0-0.1	BH18_0.0-0.1	BH18_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47996	S20-No47998	S20-No48000	S20-No48001
Date Sampled			Nov 25, 2020	Nov 25, 2020	Nov 25, 2020	Nov 25, 2020
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	%	86	91	75	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	190	170	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	190	170	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	85	101	93	84
p-Terphenyl-d14 (surr.)	1	%	92	88	86	96
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-BHC	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-BHC	0.05	mg/kg	-	< 0.05	-	-
d-BHC	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-

Client Sample ID			BH16_0.5-0.6	BH17_0.0-0.1	BH18_0.0-0.1	BH18_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47996	S20-No47998	S20-No48000	S20-No48001
Date Sampled			Nov 25, 2020	Nov 25, 2020	Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	0.1	mg/kg	-	< 0.1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	-	105	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	96	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			BH16_0.5-0.6	BH17_0.0-0.1	BH18_0.0-0.1	BH18_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No47996	S20-No47998	S20-No48000	S20-No48001
Date Sampled			Nov 25, 2020	Nov 25, 2020	Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	91	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB*	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	105	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	96	-	-
Heavy Metals						
Arsenic	2	mg/kg	14	3.0	6.6	8.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	18	12	31	15
Copper	5	mg/kg	36	24	84	10
Lead	5	mg/kg	43	26	180	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	8.0	17	< 5
Zinc	5	mg/kg	35	110	430	60
% Moisture	1	%	21	20	22	18

Client Sample ID			BH19_0.0-0.1	BH20_0.0-0.1	BH21_0.0-0.1	BH21_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No48003	S20-No48005	S20-No48006	S20-No48007
Date Sampled			Nov 25, 2020	Nov 25, 2020	Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	57	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	250	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	330	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	637	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	91	90	81	103

Client Sample ID			BH19_0.0-0.1	BH20_0.0-0.1	BH21_0.0-0.1	BH21_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No48003	S20-No48005	S20-No48006	S20-No48007
Date Sampled			Nov 25, 2020	Nov 25, 2020	Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	82	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	82	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	470	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	652	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.7	< 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	1.2	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	101	88	85	73
p-Terphenyl-d14 (surr.)	1	%	101	92	88	81
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			BH19_0.0-0.1	BH20_0.0-0.1	BH21_0.0-0.1	BH21_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No48003	S20-No48005	S20-No48006	S20-No48007
Date Sampled			Nov 25, 2020	Nov 25, 2020	Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-	-
Toxaphene	0.1	mg/kg	< 0.1	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	-	-
Dibutylchlorendate (surr.)	1	%	129	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	90	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	119	-	-	-

Client Sample ID			BH19_0.0-0.1	BH20_0.0-0.1	BH21_0.0-0.1	BH21_0.5-0.6
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No48003**	**S20-No48005**	**S20-No48006**	**S20-No48007**
Date Sampled			**Nov 25, 2020**	**Nov 25, 2020**	**Nov 25, 2020**	**Nov 25, 2020**
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-	-
Total PCB*	0.5	mg/kg	< 0.5	-	-	-
Dibutylchlorendate (surr.)	1	%	129	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	90	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	4.6	4.9	9.7	11
Cadmium	0.4	mg/kg	0.5	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	36	21	39	21
Copper	5	mg/kg	79	25	25	12
Lead	5	mg/kg	150	84	36	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	27	23	7.4	< 5
Zinc	5	mg/kg	420	94	110	130
% Moisture	1	%	11	26	27	21

Client Sample ID			BH22_0.0-0.1	BH23_0.0-0.1
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S20-No48009**	**S20-No48010**
Date Sampled			**Nov 25, 2020**	**Nov 25, 2020**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	57	< 20
TRH C15-C28	50	mg/kg	270	81
TRH C29-C36	50	mg/kg	300	84
TRH C10-C36 (Total)	50	mg/kg	627	165
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	88	108
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	75	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	75	< 50
TRH >C16-C34	100	mg/kg	460	130

Client Sample ID			BH22_0.0-0.1	BH23_0.0-0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No48009	S20-No48010
Date Sampled			Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	535	130
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	%	106	110
p-Terphenyl-d14 (surr.)	1	%	93	108
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2
Toxaphene	0.1	mg/kg	-	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05

Client Sample ID			BH22_0.0-0.1	BH23_0.0-0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No48009	S20-No48010
Date Sampled			Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	147
Tetrachloro-m-xylene (surr.)	1	%	-	93
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	-	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2
Coumaphos	2	mg/kg	-	< 2
Demeton-S	0.2	mg/kg	-	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2
EPN	0.2	mg/kg	-	< 0.2
Ethion	0.2	mg/kg	-	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2
Malathion	0.2	mg/kg	-	< 0.2
Merphos	0.2	mg/kg	-	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2
Monocrotophos	2	mg/kg	-	< 2
Naled	0.2	mg/kg	-	< 0.2
Omethoate	2	mg/kg	-	< 2
Phorate	0.2	mg/kg	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2
Triphenylphosphate (surr.)	1	%	-	INT
Polychlorinated Biphenyls				
Aroclor-1016	0.5	mg/kg	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5
Total PCB*	0.5	mg/kg	-	< 0.5

Client Sample ID			BH22_0.0-0.1	BH23_0.0-0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No48009	S20-No48010
Date Sampled			Nov 25, 2020	Nov 25, 2020
Test/Reference	LOR	Unit		
Polychlorinated Biphenyls				
Dibutylchlorendate (surr.)	1	%	-	147
Tetrachloro-m-xylene (surr.)	1	%	-	93
Heavy Metals				
Arsenic	2	mg/kg	7.7	4.1
Cadmium	0.4	mg/kg	0.4	< 0.4
Chromium	5	mg/kg	43	7.2
Copper	5	mg/kg	85	29
Lead	5	mg/kg	57	24
Mercury	0.1	mg/kg	0.2	< 0.1
Nickel	5	mg/kg	25	< 5
Zinc	5	mg/kg	480	62
% Moisture	1	%	18	7.2

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 03, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 30, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 30, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 03, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 03, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Nov 30, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Nov 30, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 30, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Nov 30, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Nov 27, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	BH01_0.0-0.1	Nov 23, 2020		Soil	S20-No47967	X		X	X	X
2	BH01_0.5-0.6	Nov 23, 2020		Soil	S20-No47968				X	X
3	BH01_0.9-1.0	Nov 23, 2020		Soil	S20-No47969		X			
4	BH02_0.0-0.1	Nov 23, 2020		Soil	S20-No47970				X	X
5	BH03_0.0-0.1	Nov 23, 2020		Soil	S20-No47971	X			X	X
6	BH03_0.5-0.6	Nov 23, 2020		Soil	S20-No47972				X	X
7	BH03_0.9-1.0	Nov 23, 2020		Soil	S20-No47973		X			
8	BH04_0.0-0.1	Nov 23, 2020		Soil	S20-No47974	X		X	X	X
9	BH04_0.5-0.6	Nov 23, 2020		Soil	S20-No47975				X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
10	BH04_0.9-1.0	Nov 23, 2020		Soil	S20-No47976		X			
11	BH05_0.0-0.1	Nov 23, 2020		Soil	S20-No47977	X			X	X
12	BH05_0.5-0.6	Nov 23, 2020		Soil	S20-No47978		X			
13	BH05_0.9-1.0	Nov 23, 2020		Soil	S20-No47979		X			
14	BH06_0.0-0.1	Nov 23, 2020		Soil	S20-No47980				X	X
15	BH08_0.0-0.1	Nov 23, 2020		Soil	S20-No47981	X		X	X	X
16	R1	Nov 23, 2020		Water	S20-No47982		X			
17	BH07_0.0-0.1	Nov 24, 2020		Soil	S20-No47983	X			X	X
18	BH07_0.5-0.6	Nov 24, 2020		Soil	S20-No47984				X	X
19	BH07_0.8-0.9	Nov 24, 2020		Soil	S20-No47985		X			
20	BH12_0.0-0.1	Nov 24, 2020		Soil	S20-No47986	X		X	X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
21	BH12_0.5-0.6	Nov 24, 2020		Soil	S20-No47987				X	X
22	BH12_0.9-1.0	Nov 24, 2020		Soil	S20-No47988		X			
23	BH13_0.0-0.1	Nov 24, 2020		Soil	S20-No47989				X	X
24	BH13_0.5-0.6	Nov 24, 2020		Soil	S20-No47990				X	X
25	BH14_0.0-0.1	Nov 24, 2020		Soil	S20-No47991	X			X	X
26	BH14_0.5-0.6	Nov 24, 2020		Soil	S20-No47992				X	X
27	BH14_0.9-1.0	Nov 24, 2020		Soil	S20-No47993		X			
28	BH15_0.0-0.1	Nov 24, 2020		Soil	S20-No47994	X		X	X	X
29	BH16_0.0-0.1	Nov 25, 2020		Soil	S20-No47995	X		X	X	X
30	BH16_0.5-0.6	Nov 25, 2020		Soil	S20-No47996				X	X
31	BH16_0.9-1.0	Nov 25, 2020		Soil	S20-No47997		X			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
32	BH17_0.0-0.1	Nov 25, 2020		Soil	S20-No47998	X		X	X	X
33	BH17_0.3-0.4	Nov 25, 2020		Soil	S20-No47999		X			
34	BH18_0.0-0.1	Nov 25, 2020		Soil	S20-No48000				X	X
35	BH18_0.5-0.6	Nov 25, 2020		Soil	S20-No48001				X	X
36	BH18_0.8-0.9	Nov 25, 2020		Soil	S20-No48002		X			
37	BH19_0.0-0.1	Nov 25, 2020		Soil	S20-No48003			X	X	X
38	BH19_0.25-0.35	Nov 25, 2020		Soil	S20-No48004		X			
39	BH20_0.0-0.1	Nov 25, 2020		Soil	S20-No48005				X	X
40	BH21_0.0-0.1	Nov 25, 2020		Soil	S20-No48006				X	X
41	BH21_0.5-0.6	Nov 25, 2020		Soil	S20-No48007				X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
42	BH21_1.0-1.1	Nov 25, 2020		Soil	S20-No48008		X			
43	BH22_0.0-0.1	Nov 25, 2020		Soil	S20-No48009	X			X	X
44	BH23_0.0-0.1	Nov 25, 2020		Soil	S20-No48010	X		X	X	X
Test Counts						13	14	9	30	30

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

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

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

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	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	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	104			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	101			70-130	Pass	
Toluene	%	102			70-130	Pass	
Ethylbenzene	%	98			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
o-Xylene	%	95			70-130	Pass	
Xylenes - Total*	%	96			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	93			70-130	Pass	
TRH C6-C10	%	93			70-130	Pass	
TRH >C10-C16	%	94			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	93			70-130	Pass	
Acenaphthylene	%	92			70-130	Pass	
Anthracene	%	115			70-130	Pass	
Benz(a)anthracene	%	96			70-130	Pass	
Benzo(a)pyrene	%	91			70-130	Pass	
Benzo(b&j)fluoranthene	%	98			70-130	Pass	
Benzo(g.h.i)perylene	%	97			70-130	Pass	
Benzo(k)fluoranthene	%	82			70-130	Pass	
Chrysene	%	88			70-130	Pass	
Dibenz(a.h)anthracene	%	87			70-130	Pass	
Fluoranthene	%	92			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	88			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	96			70-130	Pass	
Pyrene	%	76			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	80			70-130	Pass	
4.4'-DDD	%	83			70-130	Pass	
4.4'-DDE	%	77			70-130	Pass	
4.4'-DDT	%	79			70-130	Pass	
a-BHC	%	85			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	%	82			70-130	Pass	
b-BHC	%	83			70-130	Pass	
d-BHC	%	91			70-130	Pass	
Dieldrin	%	78			70-130	Pass	
Endosulfan I	%	88			70-130	Pass	
Endosulfan II	%	78			70-130	Pass	
Endosulfan sulphate	%	82			70-130	Pass	
Endrin	%	105			70-130	Pass	
Endrin aldehyde	%	92			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	91			70-130	Pass	
Heptachlor	%	77			70-130	Pass	
Heptachlor epoxide	%	83			70-130	Pass	
Hexachlorobenzene	%	80			70-130	Pass	
Methoxychlor	%	118			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	78			70-130	Pass	
Dimethoate	%	129			70-130	Pass	
Ethion	%	84			70-130	Pass	
Fenitrothion	%	85			70-130	Pass	
Methyl parathion	%	81			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	100			70-130	Pass	
Aroclor-1260	%	114			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	92			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	99			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	108			80-120	Pass	
Mercury	%	111			80-120	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	96			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-No47318	NCP	%	89			70-130	Pass	
Acenaphthylene	S20-No47318	NCP	%	87			70-130	Pass	
Anthracene	S20-No47318	NCP	%	92			70-130	Pass	
Benz(a)anthracene	S20-No47318	NCP	%	84			70-130	Pass	
Benzo(a)pyrene	S20-No47318	NCP	%	82			70-130	Pass	
Benzo(b&j)fluoranthene	S20-No47318	NCP	%	86			70-130	Pass	
Benzo(g.h.i)perylene	S20-No47318	NCP	%	77			70-130	Pass	
Benzo(k)fluoranthene	S20-No47318	NCP	%	109			70-130	Pass	
Chrysene	S20-No47318	NCP	%	89			70-130	Pass	
Dibenz(a.h)anthracene	S20-No47318	NCP	%	80			70-130	Pass	
Fluoranthene	S20-No47318	NCP	%	95			70-130	Pass	
Fluorene	S20-No47318	NCP	%	96			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No47318	NCP	%	82			70-130	Pass	
Naphthalene	S20-No47318	NCP	%	87			70-130	Pass	
Phenanthrene	S20-No47318	NCP	%	98			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	S20-No47318	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-No47318	NCP	%	106			70-130	Pass	
4.4'-DDD	S20-No47318	NCP	%	97			70-130	Pass	
4.4'-DDE	S20-No47318	NCP	%	99			70-130	Pass	
4.4'-DDT	S20-No47318	NCP	%	82			70-130	Pass	
a-BHC	S20-No47318	NCP	%	103			70-130	Pass	
Aldrin	S20-No47318	NCP	%	96			70-130	Pass	
b-BHC	S20-No47318	NCP	%	106			70-130	Pass	
d-BHC	S20-No47318	NCP	%	99			70-130	Pass	
Dieldrin	S20-No47318	NCP	%	72			70-130	Pass	
Endosulfan I	S20-No47318	NCP	%	99			70-130	Pass	
Endosulfan II	S20-No47318	NCP	%	100			70-130	Pass	
Endosulfan sulphate	S20-No47318	NCP	%	86			70-130	Pass	
Endrin	S20-No47318	NCP	%	115			70-130	Pass	
Endrin ketone	S20-No47318	NCP	%	100			70-130	Pass	
g-BHC (Lindane)	S20-No47318	NCP	%	102			70-130	Pass	
Heptachlor	S20-No47318	NCP	%	105			70-130	Pass	
Heptachlor epoxide	S20-No47318	NCP	%	84			70-130	Pass	
Hexachlorobenzene	S20-No47318	NCP	%	99			70-130	Pass	
Methoxychlor	S20-No47318	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S20-No47318	NCP	%	107			70-130	Pass	
Dimethoate	B20-No45800	NCP	%	75			70-130	Pass	
Ethion	B20-No45800	NCP	%	105			70-130	Pass	
Fenitrothion	B20-No45800	NCP	%	75			70-130	Pass	
Methyl parathion	B20-No45800	NCP	%	106			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	B20-No45800	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-No47968	CP	%	74			70-130	Pass	
TRH C10-C14	S20-No47968	CP	%	87			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-No47968	CP	%	80			70-130	Pass	
Toluene	S20-No47968	CP	%	79			70-130	Pass	
Ethylbenzene	S20-No47968	CP	%	79			70-130	Pass	
m&p-Xylenes	S20-No47968	CP	%	79			70-130	Pass	
o-Xylene	S20-No47968	CP	%	77			70-130	Pass	
Xylenes - Total*	S20-No47968	CP	%	78			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-No47968	CP	%	76			70-130	Pass	
TRH C6-C10	S20-No47968	CP	%	76			70-130	Pass	
TRH >C10-C16	S20-No47968	CP	%	84			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No47975	CP	%	102			75-125	Pass	
Cadmium	S20-No47975	CP	%	110			75-125	Pass	
Chromium	S20-No47975	CP	%	106			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	S20-No47975	CP	%	105			75-125	Pass	
Lead	S20-No47975	CP	%	116			75-125	Pass	
Mercury	S20-No47975	CP	%	119			75-125	Pass	
Nickel	S20-No47975	CP	%	106			75-125	Pass	
Zinc	S20-No47975	CP	%	106			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No48006	CP	%	79			75-125	Pass	
Cadmium	S20-No48006	CP	%	100			75-125	Pass	
Copper	S20-No48006	CP	%	90			75-125	Pass	
Lead	S20-No48006	CP	%	94			75-125	Pass	
Mercury	S20-No48006	CP	%	108			75-125	Pass	
Nickel	S20-No48006	CP	%	94			75-125	Pass	
Zinc	S20-No48006	CP	%	91			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-No47967	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-No47967	CP	mg/kg	46	43	8.0	30%	Pass	
TRH C15-C28	S20-No47967	CP	mg/kg	210	180	14	30%	Pass	
TRH C29-C36	S20-No47967	CP	mg/kg	220	180	18	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No47967	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No47967	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No47967	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No47967	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No47967	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No47967	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-No47967	CP	mg/kg	62	57	10	30%	Pass	
TRH >C16-C34	S20-No47967	CP	mg/kg	330	280	16	30%	Pass	
TRH >C34-C40	S20-No47967	CP	mg/kg	150	140	12	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No47967	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-No47967	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-No47967	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-No47967	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-No47967	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S20-No47967	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-No47967	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No47968	CP	%	13	12	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No47974	CP	mg/kg	8.3	8.0	4.0	30%	Pass	
Cadmium	S20-No47974	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No47974	CP	mg/kg	21	24	17	30%	Pass	
Copper	S20-No47974	CP	mg/kg	50	62	23	30%	Pass	
Lead	S20-No47974	CP	mg/kg	180	260	38	30%	Fail	Q02
Mercury	S20-No47974	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No47974	CP	mg/kg	8.7	11	23	30%	Pass	
Zinc	S20-No47974	CP	mg/kg	94	140	40	30%	Fail	Q02
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-No47983	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-No47983	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-No47983	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-No47983	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No47983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No47983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No47983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No47983	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No47983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No47983	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No47983	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-No47983	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-No47983	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-No47983	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No47983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No47984	CP	%	21	21	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No47990	CP	mg/kg	5.4	7.3	31	30%	Fail	Q15
Cadmium	S20-No47990	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No47990	CP	mg/kg	9.2	9.8	7.0	30%	Pass	
Copper	S20-No47990	CP	mg/kg	15	17	14	30%	Pass	
Lead	S20-No47990	CP	mg/kg	100	94	8.0	30%	Pass	
Mercury	S20-No47990	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No47990	CP	mg/kg	7.5	10.0	29	30%	Pass	
Zinc	S20-No47990	CP	mg/kg	96	89	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-No47995	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-No47995	CP	mg/kg	61	69	12	30%	Pass	
TRH C29-C36	S20-No47995	CP	mg/kg	83	90	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-No47995	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-No47995	CP	mg/kg	120	130	10	30%	Pass	
TRH >C34-C40	S20-No47995	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-No47995	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin aldehyde	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-No47995	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-No47995	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-No47995	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S20-No47995	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-No47995	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S20-No47995	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S20-No47995	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No47998	CP	%	20	20	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No48005	CP	mg/kg	4.9	4.9	1.0	30%	Pass	
Cadmium	S20-No48005	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No48005	CP	mg/kg	21	27	23	30%	Pass	
Copper	S20-No48005	CP	mg/kg	25	32	24	30%	Pass	
Lead	S20-No48005	CP	mg/kg	84	100	21	30%	Pass	
Mercury	S20-No48005	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No48005	CP	mg/kg	23	25	10	30%	Pass	
Zinc	S20-No48005	CP	mg/kg	94	110	14	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-No48010	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No48010	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No48010	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No48010	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No48010	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No48010	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No48010	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No48010	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No48010	CP	mg/kg	< 20	< 20	<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
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Asim Khan	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highwa
Chatswood
NSW 2067

Attention:	Simon Hay
Report	759675-AID
Project Name	PENNANT HILLS ROAD
Project ID	754-SYDEN279944
Received Date	Nov 26, 2020
Date Reported	Dec 04, 2020

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 PENNANT HILLS ROAD
Project ID 754-SYDEN279944
Date Sampled Nov 23, 2020 to Nov 25, 2020
Report 759675-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH01_0.0-0.1	20-No47967	Nov 23, 2020	Approximate Sample 250g Sample consisted of: Brown coarse-grained soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH03_0.0-0.1	20-No47971	Nov 23, 2020	Approximate Sample 433g 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.
BH04_0.0-0.1	20-No47974	Nov 23, 2020	Approximate Sample 438g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH05_0.0-0.1	20-No47977	Nov 23, 2020	Approximate Sample 368g Sample consisted of: Brown coarse-grained clayey soil, rocks and glass	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH08_0.0-0.1	20-No47981	Nov 23, 2020	Approximate Sample 345g Sample consisted of: Brown coarse-grained soil, rocks, glass and bituminous material	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH07_0.0-0.1	20-No47983	Nov 24, 2020	Approximate Sample 413g Sample consisted of: Brown coarse-grained clayey soil, rocks, brick and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH12_0.0-0.1	20-No47986	Nov 24, 2020	Approximate Sample 498g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH14_0.0-0.1	20-No47991	Nov 24, 2020	Approximate Sample 395g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH15_0.0-0.1	20-No47994	Nov 24, 2020	Approximate Sample 519g Sample consisted of: Browon coarse-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_0.0-0.1	20-No47995	Nov 25, 2020	Approximate Sample 415g Sample consisted of: Brown coarse-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_0.0-0.1	20-No47998	Nov 25, 2020	Approximate Sample 471g Sample consisted of: Brwon coarse-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH22_0.0-0.1	20-No48009	Nov 25, 2020	Approximate Sample 423g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH23_0.0-0.1	20-No48010	Nov 25, 2020	Approximate Sample 555g Sample consisted of: Brown coarse-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 and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 27, 2020	Indefinite

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	BH01_0.0-0.1	Nov 23, 2020		Soil	S20-No47967	X		X	X	X
2	BH01_0.5-0.6	Nov 23, 2020		Soil	S20-No47968				X	X
3	BH01_0.9-1.0	Nov 23, 2020		Soil	S20-No47969		X			
4	BH02_0.0-0.1	Nov 23, 2020		Soil	S20-No47970				X	X
5	BH03_0.0-0.1	Nov 23, 2020		Soil	S20-No47971	X			X	X
6	BH03_0.5-0.6	Nov 23, 2020		Soil	S20-No47972				X	X
7	BH03_0.9-1.0	Nov 23, 2020		Soil	S20-No47973		X			
8	BH04_0.0-0.1	Nov 23, 2020		Soil	S20-No47974	X		X	X	X
9	BH04_0.5-0.6	Nov 23, 2020		Soil	S20-No47975				X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
10	BH04_0.9-1.0	Nov 23, 2020		Soil	S20-No47976		X			
11	BH05_0.0-0.1	Nov 23, 2020		Soil	S20-No47977	X			X	X
12	BH05_0.5-0.6	Nov 23, 2020		Soil	S20-No47978		X			
13	BH05_0.9-1.0	Nov 23, 2020		Soil	S20-No47979		X			
14	BH06_0.0-0.1	Nov 23, 2020		Soil	S20-No47980				X	X
15	BH08_0.0-0.1	Nov 23, 2020		Soil	S20-No47981	X		X	X	X
16	R1	Nov 23, 2020		Water	S20-No47982		X			
17	BH07_0.0-0.1	Nov 24, 2020		Soil	S20-No47983	X			X	X
18	BH07_0.5-0.6	Nov 24, 2020		Soil	S20-No47984				X	X
19	BH07_0.8-0.9	Nov 24, 2020		Soil	S20-No47985		X			
20	BH12_0.0-0.1	Nov 24, 2020		Soil	S20-No47986	X		X	X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
21	BH12_0.5-0.6	Nov 24, 2020		Soil	S20-No47987				X	X
22	BH12_0.9-1.0	Nov 24, 2020		Soil	S20-No47988		X			
23	BH13_0.0-0.1	Nov 24, 2020		Soil	S20-No47989				X	X
24	BH13_0.5-0.6	Nov 24, 2020		Soil	S20-No47990				X	X
25	BH14_0.0-0.1	Nov 24, 2020		Soil	S20-No47991	X			X	X
26	BH14_0.5-0.6	Nov 24, 2020		Soil	S20-No47992				X	X
27	BH14_0.9-1.0	Nov 24, 2020		Soil	S20-No47993		X			
28	BH15_0.0-0.1	Nov 24, 2020		Soil	S20-No47994	X		X	X	X
29	BH16_0.0-0.1	Nov 25, 2020		Soil	S20-No47995	X		X	X	X
30	BH16_0.5-0.6	Nov 25, 2020		Soil	S20-No47996				X	X
31	BH16_0.9-1.0	Nov 25, 2020		Soil	S20-No47997		X			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
32	BH17_0.0-0.1	Nov 25, 2020		Soil	S20-No47998	X		X	X	X
33	BH17_0.3-0.4	Nov 25, 2020		Soil	S20-No47999		X			
34	BH18_0.0-0.1	Nov 25, 2020		Soil	S20-No48000				X	X
35	BH18_0.5-0.6	Nov 25, 2020		Soil	S20-No48001				X	X
36	BH18_0.8-0.9	Nov 25, 2020		Soil	S20-No48002		X			
37	BH19_0.0-0.1	Nov 25, 2020		Soil	S20-No48003			X	X	X
38	BH19_0.25-0.35	Nov 25, 2020		Soil	S20-No48004		X			
39	BH20_0.0-0.1	Nov 25, 2020		Soil	S20-No48005				X	X
40	BH21_0.0-0.1	Nov 25, 2020		Soil	S20-No48006				X	X
41	BH21_0.5-0.6	Nov 25, 2020		Soil	S20-No48007				X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 759675
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Nov 26, 2020 8:38 AM
Due: Dec 3, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
42	BH21_1.0-1.1	Nov 25, 2020		Soil	S20-No48008		X			
43	BH22_0.0-0.1	Nov 25, 2020		Soil	S20-No48009	X			X	X
44	BH23_0.0-0.1	Nov 25, 2020		Soil	S20-No48010	X		X	X	X
Test Counts						13	14	9	30	30

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

#AU04_Enviro_Sample_NSW

Subject: FW: 5 day TAT Additional analysis FW: Eurofins Draft Test Results - Report 759675 : Site PENNANT HILLS ROAD (754-SYDEN279944)
Attachments: 759675-S_report.pdf

From: Hay, Simon <Simon.Hay@coffey.com>
Sent: Friday, 4 December 2020 9:01 AM
To: Asim Khan <AsimKhan@eurofins.com>
Subject: RE: Eurofins Draft Test Results - Report 759675 : Site PENNANT HILLS ROAD (754-SYDEN279944)

EXTERNAL EMAIL*

Hi Asim,

Could I please request TCLP on a 5 day turn around on the following samples please:

BH13_0.0_0.1 – lead and BaP
BH12_0.0_0.1 – Lead and Nickel
BH06_0.0_0.1 – Lead
BH05_0.0_0.1 – Lead
BH04_0.0_0.1 – Lead
BH18_0.0_0.1 – Lead

Thanks very much
Simon

From: AsimKhan@eurofins.com <AsimKhan@eurofins.com>
Sent: Thursday, December 3, 2020 6:23 PM
To: Hay, Simon <Simon.Hay@coffey.com>
Subject: Eurofins Draft Test Results - Report 759675 : Site PENNANT HILLS ROAD (754-SYDEN279944)

Please find attached draft report for your project in the subject header.

Once the remaining results become available, the final report will be issued.

Please note: My office hours are 12 pm to 8 pm.

Kind regards,

Asim Khan
Analytical Services Manager

Eurofins | Environment Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA

Phone : +61 2 9900 8432
Phone : +61 429 051 456
Email : AsimKhan@eurofins.com
Website : www.eurofins.com.au/environmental-testing

EnviroNote 1108 - Emissions from Stationary Sources
EnviroNote 1103 - NATA Accreditation for Dioxins

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Sample Receipt Advice

Company name:	Coffey Environments Pty Ltd NSW
Contact name:	Simon Hay
Project name:	ADDITIONAL PENNANT HILLS ROAD
Project ID:	754-SYDEN279944
Turnaround time:	5 Day
Date/Time received	Dec 4, 2020 9:01 AM
Eurofins reference	761623

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 17.4 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Simon Hay - simon.hay@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd NSW email address.

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: ADDITIONAL PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 761623
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 9:01 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Benzo(a)pyrene	Lead	Nickel	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	BH04_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11354		X		X
2	BH05_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11355		X		X
3	BH06_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11356		X		X
4	BH12_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11357		X	X	X
5	BH13_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11358	X	X		X
6	BH18_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11359		X		X
Test Counts						1	6	1	6

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: **Simon Hay**

Report **761623-L**
Project name ADDITIONAL PENNANT HILLS ROAD
Project ID 754-SYDEN279944
Received Date Dec 04, 2020

Client Sample ID			**BH04_0.0_0.1**	**BH05_0.0_0.1**	**BH06_0.0_0.1**	**BH12_0.0_0.1**
Sample Matrix			**US Leachate**	**US Leachate**	**US Leachate**	**US Leachate**
Eurofins Sample No.			**S20-De11354**	**S20-De11355**	**S20-De11356**	**S20-De11357**
Date Sampled			**Nov 23, 2020**	**Nov 23, 2020**	**Nov 23, 2020**	**Nov 23, 2020**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	0.01	mg/L	0.04	0.19	0.45	0.63
Nickel	0.01	mg/L	-	-	-	0.05
USA Leaching Procedure						
Leachate Fluid[C01]		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	6.0	6.3	6.2	6.6
pH (off)	0.1	pH Units	5.1	5.1	5.0	5.1
pH (USA HCl addition)	0.1	pH Units	1.7	1.7	1.7	1.7

Client Sample ID			**BH13_0.0_0.1**	**BH18_0.0_0.1**
Sample Matrix			**US Leachate**	**US Leachate**
Eurofins Sample No.			**S20-De11358**	**S20-De11359**
Date Sampled			**Nov 23, 2020**	**Nov 23, 2020**
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	0.01	mg/L	0.42	0.08
USA Leaching Procedure				
Leachate Fluid[C01]		comment	1.0	1.0
pH (initial)	0.1	pH Units	6.4	6.5
pH (off)	0.1	pH Units	5.0	5.1
pH (USA HCl addition)	0.1	pH Units	1.7	1.7
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene	0.001	mg/L	< 0.001	-

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Heavy Metals	Sydney	Dec 09, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
USA Leaching Procedure	Sydney	Dec 07, 2020	14 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 07, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: ADDITIONAL PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 761623
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 9:01 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Benzo(a)pyrene	Lead	Nickel	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	BH04_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11354		X		X
2	BH05_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11355		X		X
3	BH06_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11356		X		X
4	BH12_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11357		X	X	X
5	BH13_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11358	X	X		X
6	BH18_0.0_0.1	Nov 23, 2020		US Leachate	S20-De11359		X		X
Test Counts						1	6	1	6

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Lead	mg/L	< 0.01			0.01	Pass	
Nickel	mg/L	< 0.01			0.01	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Heavy Metals							
Lead	%	96			80-120	Pass	
Nickel	%	97			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S20-De03568	NCP	%	109			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Nickel	S20-De03568	NCP	%	103			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S20-De11358	CP	mg/L	0.42	0.43	1.0	30%	Pass	
Nickel	S20-De11358	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1 — 6063

coffey
A TETRA TECH COMPANY

Consigning Office: Chatswood
Report Results to: S. Hay — Mobile: 0424 703 009 — Email: Simon.Hay @coffey.com
Invoices to: S. Hay — Phone: — Email: @coffey.com

Project No: SYDENV279944 — Task No:
Project Name: Pennant Hills Cd — Laboratory: Eurofins
Sampler's Name: S. Hay — Project Manager: S. Hay
Special Instructions: 5 DAY TAT

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)
	R1	1.12.20		Water	vials, plastic, Amber	5 Day
	Trip Blank	1.12.20		Water		
	Trip Spike	1.12.20		Water		
	TP09_0.0_0.1	1.12.20		Soil	Jar 5 Day	
	TP09_0.4_0.5					
	TP09_0.5_0.6					
	TP10_0.0_0.1					
	TP11_0.0_0.1					

Analysis Request Section: Suite S7 | Suite B15 | Asbestos | TRH C6-C10, BTEX | Hold

NOTES

RELINQUISHED BY		RECEIVED BY	
Name: S. Hay	Date: 2.12.20	Name: R Phillips	Date: 4/12/20
Coffey Environments	Time:	Company: Eurofins	Time: 10:47 am
Name:	Date:	Name:	Date:
Company:	Time:	Company:	Time:

Sample Receipt Advice: (Lab Use Only)
All Samples Recieved in Good Condition ☐
All Documentation is in Proper Order ☐
Samples Received Properly Chilled ☐
Lab. Ref/Batch No. #162036

*Container Type & Preservation Codes: **P** - Plastic, **G**- Glass Bottle, **J** - Glass Jar, **V**- Vial, **Z** - Ziplock Bag, **N** - Nitric Acid Preserved, **C** - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice, **ST** - Sodium Thiosulfate, **NP** - No Preservative, **OP** - Other Preservative

GOWANS PRINTING (02) 9755 3545

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Sample Receipt Advice

Company name:	Coffey Environments Pty Ltd NSW
Contact name:	Simon Hay
Project name:	PENNANT HILLLS RD
Project ID:	SYDEN279944
Turnaround time:	5 Day
Date/Time received	Dec 4, 2020 10:47 AM
Eurofins reference	762036

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 6.5 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Sample labels begin with BHxx instead of TPxx. Logged as per COC.

Contact

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

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Simon Hay - simon.hay@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd NSW email address.

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLLS RD
Project ID: SYDEN279944

Order No.:
Report #: 762036
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:47 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	R1	Dec 01, 2020		Water	S20-De15672					X		
2	TRIP BLANK	Dec 01, 2020		Water	S20-De15673						X	
3	TRIP SPIKE	Dec 01, 2020		Water	S20-De15674							X
4	BH09_0.0_0.1	Dec 01, 2020		Soil	S20-De15675			X	X	X		
5	BH09_0.4_0.5	Dec 01, 2020		Soil	S20-De15676		X					
6	BH09_0.5_0.6	Dec 01, 2020		Soil	S20-De15677				X	X		
7	BH10_0.0_0.1	Dec 01, 2020		Soil	S20-De15678	X			X	X		
8	TP11_0.0_0.1	Dec 01, 2020		Soil	S20-De15679		X					
Test Counts						1	2	1	3	4	1	1

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Simon Hay**

Report **762036-S-V2**
Project name PENNANT HILLLS RD
Project ID SYDEN279944
Received Date Dec 04, 2020

Client Sample ID			**BH09_0.0_0.1**	**BH09_0.5_0.6**	**BH10_0.0_0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-De15675**	**S20-De15677**	**S20-De15678**
Date Sampled			**Dec 01, 2020**	**Dec 01, 2020**	**Dec 01, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	73	< 50	< 50
TRH C29-C36	50	mg/kg	95	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	168	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	81	77	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	150	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	150	< 100	< 100
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			BH09_0.0_0.1	BH09_0.5_0.6	BH10_0.0_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-De15675	S20-De15677	S20-De15678
Date Sampled			Dec 01, 2020	Dec 01, 2020	Dec 01, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.7	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	0.7	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	119	112	116
p-Terphenyl-d14 (surr.)	1	%	112	101	107
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-
Methoxychlor	0.2	mg/kg	< 0.2	-	-
Toxaphene	0.1	mg/kg	< 0.1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	122	-	-
Tetrachloro-m-xylene (surr.)	1	%	119	-	-
Organophosphorus Pesticides					
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-
Coumaphos	2	mg/kg	< 2	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-

Client Sample ID			BH09_0.0_0.1	BH09_0.5_0.6	BH10_0.0_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-De15675	S20-De15677	S20-De15678
Date Sampled			Dec 01, 2020	Dec 01, 2020	Dec 01, 2020
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Dimethoate	0.2	mg/kg	< 0.2	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-
EPN	0.2	mg/kg	< 0.2	-	-
Ethion	0.2	mg/kg	< 0.2	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-
Malathion	0.2	mg/kg	< 0.2	-	-
Merphos	0.2	mg/kg	< 0.2	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-
Monocrotophos	2	mg/kg	< 2	-	-
Naled	0.2	mg/kg	< 0.2	-	-
Omethoate	2	mg/kg	< 2	-	-
Phorate	0.2	mg/kg	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	INT	-	-
Polychlorinated Biphenyls					
Aroclor-1016	0.5	mg/kg	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	122	-	-
Tetrachloro-m-xylene (surr.)	1	%	119	-	-
Heavy Metals					
Arsenic	2	mg/kg	8.7	18	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	31	24
Copper	5	mg/kg	47	10	16
Lead	5	mg/kg	410	16	32
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	< 5	18
Zinc	5	mg/kg	190	11	51
% Moisture	1	%	15	18	2.4

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Dec 08, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Dec 08, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Dec 08, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLLS RD
Project ID: SYDEN279944

Order No.:
Report #: 762036
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:47 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	R1	Dec 01, 2020		Water	S20-De15672					X		
2	TRIP BLANK	Dec 01, 2020		Water	S20-De15673						X	
3	TRIP SPIKE	Dec 01, 2020		Water	S20-De15674							X
4	BH09_0.0_0.1	Dec 01, 2020		Soil	S20-De15675			X	X	X		
5	BH09_0.4_0.5	Dec 01, 2020		Soil	S20-De15676		X					
6	BH09_0.5_0.6	Dec 01, 2020		Soil	S20-De15677				X	X		
7	BH10_0.0_0.1	Dec 01, 2020		Soil	S20-De15678	X			X	X		
8	TP11_0.0_0.1	Dec 01, 2020		Soil	S20-De15679		X					
Test Counts						1	2	1	3	4	1	1

eurofins | Environment Testing

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

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

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total PCB*	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	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	81			70-130	Pass	
TRH C10-C14	%	83			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	100			70-130	Pass	
Ethylbenzene	%	103			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
o-Xylene	%	106			70-130	Pass	
Xylenes - Total*	%	107			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	96			70-130	Pass	
TRH C6-C10	%	82			70-130	Pass	
TRH >C10-C16	%	81			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	89			70-130	Pass	
Acenaphthylene	%	124			70-130	Pass	
Anthracene	%	96			70-130	Pass	
Benz(a)anthracene	%	94			70-130	Pass	
Benzo(a)pyrene	%	86			70-130	Pass	
Benzo(b&j)fluoranthene	%	83			70-130	Pass	
Benzo(g.h.i)perylene	%	88			70-130	Pass	
Benzo(k)fluoranthene	%	102			70-130	Pass	
Chrysene	%	88			70-130	Pass	
Dibenz(a.h)anthracene	%	87			70-130	Pass	
Fluoranthene	%	106			70-130	Pass	
Fluorene	%	94			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	86			70-130	Pass	
Naphthalene	%	86			70-130	Pass	
Phenanthrene	%	91			70-130	Pass	
Pyrene	%	95			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	101			70-130	Pass	
4.4'-DDD	%	107			70-130	Pass	
4.4'-DDE	%	89			70-130	Pass	
4.4'-DDT	%	117			70-130	Pass	
a-BHC	%	85			70-130	Pass	
Aldrin	%	90			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
b-BHC	%	96			70-130	Pass	
d-BHC	%	82			70-130	Pass	
Dieldrin	%	108			70-130	Pass	
Endosulfan I	%	105			70-130	Pass	
Endosulfan II	%	99			70-130	Pass	
Endosulfan sulphate	%	91			70-130	Pass	
Endrin	%	127			70-130	Pass	
Endrin aldehyde	%	120			70-130	Pass	
Endrin ketone	%	90			70-130	Pass	
g-BHC (Lindane)	%	90			70-130	Pass	
Heptachlor	%	106			70-130	Pass	
Heptachlor epoxide	%	111			70-130	Pass	
Hexachlorobenzene	%	87			70-130	Pass	
Methoxychlor	%	121			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	107			70-130	Pass	
Dimethoate	%	115			70-130	Pass	
Ethion	%	111			70-130	Pass	
Fenitrothion	%	121			70-130	Pass	
Methyl parathion	%	127			70-130	Pass	
Mevinphos	%	130			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	91			70-130	Pass	
Aroclor-1260	%	99			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	105			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	102			80-120	Pass	
Copper	%	104			80-120	Pass	
Lead	%	113			80-120	Pass	
Mercury	%	109			80-120	Pass	
Nickel	%	105			80-120	Pass	
Zinc	%	109			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-De20155	NCP	%	72			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-De22881	NCP	%	76			70-130	Pass	
Toluene	S20-De22881	NCP	%	78			70-130	Pass	
Ethylbenzene	S20-De22881	NCP	%	87			70-130	Pass	
m&p-Xylenes	S20-De22881	NCP	%	91			70-130	Pass	
o-Xylene	S20-De22881	NCP	%	94			70-130	Pass	
Xylenes - Total*	S20-De22881	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-De22881	NCP	%	83			70-130	Pass	
TRH C6-C10	S20-De20155	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthene	S20-De18916	NCP	%	123			70-130	Pass	
Acenaphthylene	S20-De16161	NCP	%	118			70-130	Pass	
Anthracene	S20-De18916	NCP	%	128			70-130	Pass	
Benz(a)anthracene	S20-De18916	NCP	%	130			70-130	Pass	
Benzo(a)pyrene	S20-De18916	NCP	%	122			70-130	Pass	
Benzo(b&j)fluoranthene	S20-De18916	NCP	%	122			70-130	Pass	
Benzo(g.h.i)perylene	S20-De18916	NCP	%	121			70-130	Pass	
Benzo(k)fluoranthene	S20-De18916	NCP	%	140			70-130	Fail	Q08
Chrysene	S20-De18916	NCP	%	124			70-130	Pass	
Dibenz(a.h)anthracene	S20-De18916	NCP	%	115			70-130	Pass	
Fluoranthene	S20-De16161	NCP	%	115			70-130	Pass	
Fluorene	S20-De18916	NCP	%	126			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-De18916	NCP	%	118			70-130	Pass	
Naphthalene	S20-De18916	NCP	%	124			70-130	Pass	
Phenanthrene	S20-De18916	NCP	%	130			70-130	Pass	
Pyrene	S20-De16161	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-De18916	NCP	%	112			70-130	Pass	
4.4'-DDD	S20-De18916	NCP	%	119			70-130	Pass	
4.4'-DDE	S20-De18916	NCP	%	98			70-130	Pass	
4.4'-DDT	S20-De16161	NCP	%	103			70-130	Pass	
a-BHC	S20-De18916	NCP	%	88			70-130	Pass	
Aldrin	S20-De18916	NCP	%	92			70-130	Pass	
b-BHC	S20-De18916	NCP	%	101			70-130	Pass	
d-BHC	S20-De18916	NCP	%	89			70-130	Pass	
Dieldrin	S20-De18916	NCP	%	122			70-130	Pass	
Endosulfan I	S20-De18916	NCP	%	117			70-130	Pass	
Endosulfan II	S20-De18916	NCP	%	117			70-130	Pass	
Endosulfan sulphate	S20-De18916	NCP	%	100			70-130	Pass	
Endrin	S20-De22168	NCP	%	130			70-130	Pass	
Endrin aldehyde	S20-De16161	NCP	%	100			70-130	Pass	
Endrin ketone	S20-De18916	NCP	%	106			70-130	Pass	
g-BHC (Lindane)	S20-De18916	NCP	%	97			70-130	Pass	
Heptachlor	S20-De18916	NCP	%	124			70-130	Pass	
Heptachlor epoxide	S20-De16161	NCP	%	105			70-130	Pass	
Hexachlorobenzene	S20-De18916	NCP	%	96			70-130	Pass	
Methoxychlor	S20-De22168	NCP	%	119			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S20-De17239	NCP	%	129			70-130	Pass	
Dimethoate	S20-De17239	NCP	%	128			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S20-De17239	NCP	%	92			70-130	Pass	
Aroclor-1260	S20-De17239	NCP	%	106			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-De15289	NCP	%	113			75-125	Pass	
Cadmium	S20-De15289	NCP	%	108			75-125	Pass	
Chromium	S20-De15289	NCP	%	116			75-125	Pass	
Copper	S20-De15289	NCP	%	108			75-125	Pass	
Lead	S20-De15289	NCP	%	109			75-125	Pass	
Mercury	S20-De15289	NCP	%	112			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	S20-De15289	NCP	%	108			75-125	Pass	
Zinc	S20-De15289	NCP	%	119			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-De15678	CP	%	106			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-De15678	CP	%	103			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-De12512	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-De11067	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-De11067	NCP	mg/kg	260	190	31	30%	Fail	Q15
TRH C29-C36	S20-De11067	NCP	mg/kg	150	120	23	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-De12512	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-De12512	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-De12512	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-De12512	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-De12512	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-De12512	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-De12512	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-De12512	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-De11067	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-De11067	NCP	mg/kg	370	280	28	30%	Pass	
TRH >C34-C40	S20-De11067	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N20-De10508	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	N20-De10508	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
a-BHC	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	N20-De10508	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	N20-De10508	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	N20-De10508	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	N20-De10508	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	N20-De10508	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S20-De07272	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S20-De07272	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S20-De07272	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S20-De07272	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S20-De07272	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S20-De07272	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S20-De07272	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S20-De07272	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-De15290	NCP	mg/kg	17	18	8.0	30%	Pass	
Cadmium	S20-De15290	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-De15290	NCP	mg/kg	17	19	10	30%	Pass	
Copper	S20-De15290	NCP	mg/kg	29	31	8.0	30%	Pass	
Lead	S20-De15290	NCP	mg/kg	20	22	11	30%	Pass	
Mercury	S20-De15290	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-De15290	NCP	mg/kg	13	14	4.0	30%	Pass	
Zinc	S20-De15290	NCP	mg/kg	52	54	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-De15678	CP	%	2.4	4.0	50	30%	Fail	Q15

Comments

This report has been revised (V2) to amend sample names.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Simon Hay**

Report **762036-W-V2**
Project name PENNANT HILLLS RD
Project ID SYDEN279944
Received Date Dec 04, 2020

Client Sample ID			**R1**	**TRIP BLANK**	**TRIP SPIKE**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-De15672**	**S20-De15673**	**S20-De15674**
Date Sampled			**Dec 01, 2020**	**Dec 01, 2020**	**Dec 01, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	104	108	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.1	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.1	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-

Client Sample ID			R1	TRIP BLANK	TRIP SPIKE
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-De15672	S20-De15673	S20-De15674
Date Sampled			Dec 01, 2020	Dec 01, 2020	Dec 01, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	INT	-	-
p-Terphenyl-d14 (surr.)	1	%	135	-	-
Heavy Metals					
Arsenic	0.001	mg/L	< 0.001	-	-
Cadmium	0.0002	mg/L	< 0.0002	-	-
Chromium	0.001	mg/L	< 0.001	-	-
Copper	0.001	mg/L	< 0.001	-	-
Lead	0.001	mg/L	< 0.001	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.001	mg/L	< 0.001	-	-
Zinc	0.005	mg/L	< 0.005	-	-
TRH C6-C10	1	%	-	-	77
Total Recoverable Hydrocarbons					
Naphthalene	1	%	-	-	97
TRH C6-C9	1	%	-	-	75
BTEX					
Benzene	1	%	-	-	110
Ethylbenzene	1	%	-	-	93
m&p-Xylenes	1	%	-	-	100
o-Xylene	1	%	-	-	88
Toluene	1	%	-	-	97
Xylenes - Total	1	%	-	-	92
4-Bromofluorobenzene (surr.)	1	%	-	-	103

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 08, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 08, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 08, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Dec 08, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 08, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 08, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Dec 08, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLLS RD
Project ID: SYDEN279944

Order No.:
Report #: 762036
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:47 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	R1	Dec 01, 2020		Water	S20-De15672					X		
2	TRIP BLANK	Dec 01, 2020		Water	S20-De15673						X	
3	TRIP SPIKE	Dec 01, 2020		Water	S20-De15674							X
4	BH09_0.0_0.1	Dec 01, 2020		Soil	S20-De15675			X	X	X		
5	BH09_0.4_0.5	Dec 01, 2020		Soil	S20-De15676		X					
6	BH09_0.5_0.6	Dec 01, 2020		Soil	S20-De15677				X	X		
7	BH10_0.0_0.1	Dec 01, 2020		Soil	S20-De15678	X			X	X		
8	TP11_0.0_0.1	Dec 01, 2020		Soil	S20-De15679		X					
Test Counts						1	2	1	3	4	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	93			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	%	125			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	93			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
o-Xylene	%	96			70-130	Pass	
Xylenes - Total*	%	96			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	84			70-130	Pass	
TRH C6-C10	%	92			70-130	Pass	
TRH >C10-C16	%	114			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Anthracene	%	71			70-130	Pass	
Chrysene	%	75			70-130	Pass	
Fluoranthene	%	75			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	71			70-130	Pass	
Phenanthrene	%	76			70-130	Pass	
Pyrene	%	75			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	98			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	105			80-120	Pass	
Nickel	%	97			80-120	Pass	
Zinc	%	97			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-De12528	NCP	%	58			70-130	Fail	Q08
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-De12528	NCP	%	51			70-130	Fail	Q08
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Chrysene	S20-De16967	NCP	%	71			70-130	Pass	
Phenanthrene	S20-De16967	NCP	%	71			70-130	Pass	
Pyrene	S20-De16967	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-De15125	NCP	%	99			75-125	Pass	
Cadmium	S20-De15125	NCP	%	101			75-125	Pass	
Chromium	S20-De15125	NCP	%	99			75-125	Pass	
Copper	S20-De15125	NCP	%	97			75-125	Pass	
Lead	S20-De15125	NCP	%	100			75-125	Pass	
Mercury	S20-De15125	NCP	%	108			75-125	Pass	
Nickel	S20-De15125	NCP	%	98			75-125	Pass	
Zinc	S20-De15125	NCP	%	96			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-De25354	NCP	mg/L	0.05	0.05	4.0	30%	Pass	
TRH C10-C14	S20-De17320	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S20-De17320	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S20-De17320	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-De25354	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-De25354	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-De25354	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-De25354	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-De25354	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S20-De25354	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-De25354	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S20-De25354	NCP	mg/L	0.05	0.05	4.0	30%	Pass	
TRH >C10-C16	S20-De17320	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S20-De17320	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S20-De17320	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S20-De17050	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-De10043	NCP	mg/L	0.001	0.001	1.0	30%	Pass	
Cadmium	S20-De10043	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-De10043	NCP	mg/L	0.012	0.013	6.0	30%	Pass	
Copper	S20-De10043	NCP	mg/L	0.090	0.097	8.0	30%	Pass	
Lead	S20-De10043	NCP	mg/L	0.006	0.007	11	30%	Pass	
Mercury	S20-De10043	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-De10043	NCP	mg/L	0.006	0.007	8.0	30%	Pass	
Zinc	S20-De10043	NCP	mg/L	0.24	0.25	6.0	30%	Pass	

Comments

This report has been revised (V2) to amend sample names.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highwa
Chatswood
NSW 2067

Attention:	Simon Hay
Report	762036-AID-V2
Project Name	PENNANT HILLLS RD
Project ID	SYDEN279944
Received Date	Dec 04, 2020
Date Reported	Dec 15, 2020

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 PENNANT HILLLS RD
Project ID SYDEN279944
Date Sampled Dec 01, 2020
Report 762036-AID-V2

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH10_0.0_0.1	20-De15678	Dec 01, 2020	Approximate Sample 149g Sample consisted of: Brown coarse-grained sandy soil, rocks and organic debris	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 and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Dec 08, 2020	Indefinite

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLLS RD
Project ID: SYDEN279944

Order No.:
Report #: 762036
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:47 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	R1	Dec 01, 2020		Water	S20-De15672					X		
2	TRIP BLANK	Dec 01, 2020		Water	S20-De15673						X	
3	TRIP SPIKE	Dec 01, 2020		Water	S20-De15674							X
4	BH09_0.0_0.1	Dec 01, 2020		Soil	S20-De15675			X	X	X		
5	BH09_0.4_0.5	Dec 01, 2020		Soil	S20-De15676		X					
6	BH09_0.5_0.6	Dec 01, 2020		Soil	S20-De15677				X	X		
7	BH10_0.0_0.1	Dec 01, 2020		Soil	S20-De15678	X			X	X		
8	TP11_0.0_0.1	Dec 01, 2020		Soil	S20-De15679		X					
Test Counts						1	2	1	3	4	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

This report has been revised (V2) to amend sample names.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ____ of ____ 6064

coffey
A TETRA TECH COMPANY

Consigning Office:

Report Results to: S. Hay Mobile: 0424 703 009 Email: Simon.Hay @coffey.com

Invoices to: S. Hay Phone: Email: @coffey.com

Project No: SYDEN279944 Task No:

Project Name: Tennant Hills Rd Laboratory: Eurofins

Sampler's Name: Simon Hay Project Manager: S. Hay

Special Instructions: 5 Day TAT

Please FWD QC2 to ALS

Analysis Request Section

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	Suite 7	Suite 15 As log Tal	Hold	NOTES
	TP11A-0.0-0.1	2.12.20		Soil	Jar	5 Day	✓			
	QC1						✓			
	QC2						✓			FWD to ALS
G	BH02-0.4-0.6	2.12.20		soil	Jar & Bag	5 DAY	✓			
	GBH08-0.0-0.1	2.12.20		soil	Jar & Bag	5 Day	✓	✓	✓	
	GBH08-0.3-0.4	↓		↓	↓	↓				
	GBH09-0.8-1.0						✓			
	GBH08-1.4-1.5									
	GBH08-1.9-2.0									
	GBH06-0.0-0.1	2.12.20					✓	✓		
	GBH06-0.3-0.4	↓								

RELINQUISHED BY

Name: Simon Hay Date: 3.12.20 →

Coffey Environments Time:

Name: Date: →

Company: Time:

RECEIVED BY

Name: Sally W Date: 10:45 am

Company: Eurofins Time: 4/12/2020

Name: Date:

Company: Time:

Sample Receipt Advice: (Lab Use Only)

All Samples Recieved in Good Condition ☑

All Documentation is in Proper Order ☐

Samples Received Properly Chilled ☑

Lab. Ref/Batch No. #761999

***Container Type & Preservation Codes:** **P** - Plastic, **G**- Glass Bottle, **J** - Glass Jar, **V**- Vial, **Z** - Ziplock Bag, **N** - Nitric Acid Preserved, **C** - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice, **ST** - Sodium Thiosulfate, **NP** - No Preservative, **OP** - Other Preservative

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Sample Receipt Advice

Company name:	Coffey Environments Pty Ltd NSW
Contact name:	Simon Hay
Project name:	PENNANT HILLS ROAD
Project ID:	SYDEN279944
Turnaround time:	5 Day
Date/Time received	Dec 4, 2020 10:45 AM
Eurofins reference	761999

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 6.5 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

QC2 Forwarded to ALS for analysis.

Contact

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

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Simon Hay - simon.hay@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd NSW email address.

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 761999
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:45 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	BH11A	Dec 02, 2020		Soil	S20-De15072				X	X
2	QC1	Dec 02, 2020		Soil	S20-De15073				X	X
3	GBH02_0.4-0.6	Dec 02, 2020		Soil	S20-De15074				X	X
4	GBH08_0.0-0.1	Dec 02, 2020		Soil	S20-De15075	X		X	X	X
5	GBH08_0.8-1.0	Dec 02, 2020		Soil	S20-De15076				X	X
6	GBH06_0.0-0.1	Dec 02, 2020		Soil	S20-De15077	X			X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 761999
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:45 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
7	GBH08_0.3-0.4	Dec 02, 2020		Soil	S20-De15078		X			
8	GBH08_1.4-1.5	Dec 02, 2020		Soil	S20-De15079		X			
9	GBH08_1.9-2.0	Dec 02, 2020		Soil	S20-De15080		X			
10	GBH06_0.3-0.4	Dec 02, 2020		Soil	S20-De15081		X			
Test Counts						2	4	1	6	6

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Simon Hay**

Report **761999-S-V2**
Project name PENNANT HILLS ROAD
Project ID SYDEN279944
Received Date Dec 04, 2020

Client Sample ID			[G01]**BH11A**	[G01]**QC1**	**GBH02_0.4-0.6**	[G01]**GBH08_0.0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-De15072**	**S20-De15073**	**S20-De15074**	**S20-De15075**
Date Sampled			**Dec 02, 2020**	**Dec 02, 2020**	**Dec 02, 2020**	**Dec 02, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 100	< 100	< 20	700
TRH C15-C28	50	mg/kg	< 250	< 250	< 50	4800
TRH C29-C36	50	mg/kg	< 250	< 250	< 50	4400
TRH C10-C36 (Total)	50	mg/kg	< 250	< 250	< 50	9900
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	%	70	57	70	56
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 250	< 250	< 50	2000
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 250	< 250	< 50	2000
TRH >C16-C34	100	mg/kg	< 500	< 500	< 100	7800
TRH >C34-C40	100	mg/kg	< 500	< 500	< 100	1400
TRH >C10-C40 (total)*	100	mg/kg	< 500	< 500	< 100	11200
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]BH11A	[G01]QC1	GBH02_0.4-0.6	[G01]GBH08_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-De15072	S20-De15073	S20-De15074	S20-De15075
Date Sampled			Dec 02, 2020	Dec 02, 2020	Dec 02, 2020	Dec 02, 2020
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	%	94	113	95	84
p-Terphenyl-d14 (surr.)	1	%	109	144	132	113
Heavy Metals						
Arsenic	2	mg/kg	11	12	< 2	5.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	18	18	20	16
Copper	5	mg/kg	17	20	82	45
Lead	5	mg/kg	260	340	< 5	55
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.0	6.2	76	9.0
Zinc	5	mg/kg	140	180	74	250
% Moisture	1	%	21	27	10	44
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.5
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.5
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.5
a-BHC	0.05	mg/kg	-	-	-	< 0.5
Aldrin	0.05	mg/kg	-	-	-	< 0.5
b-BHC	0.05	mg/kg	-	-	-	< 0.5
d-BHC	0.05	mg/kg	-	-	-	< 0.5
Dieldrin	0.05	mg/kg	-	-	-	< 0.5
Endosulfan I	0.05	mg/kg	-	-	-	< 0.5
Endosulfan II	0.05	mg/kg	-	-	-	< 0.5
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.5
Endrin	0.05	mg/kg	-	-	-	< 0.5
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.5
Endrin ketone	0.05	mg/kg	-	-	-	< 0.5
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.5
Heptachlor	0.05	mg/kg	-	-	-	< 0.5
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.5
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.5
Methoxychlor	0.2	mg/kg	-	-	-	< 0.5
Toxaphene	0.1	mg/kg	-	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	121
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	106

Client Sample ID			[G01]BH11A	[G01]QC1	GBH02_0.4-0.6	[G01]GBH08_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-De15072	S20-De15073	S20-De15074	S20-De15075
Date Sampled			Dec 02, 2020	Dec 02, 2020	Dec 02, 2020	Dec 02, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	-	< 0.5
Bolstar	0.2	mg/kg	-	-	-	< 0.5
Chlorfenvinphos	0.2	mg/kg	-	-	-	< 0.5
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.5
Chlorpyrifos-methyl	0.2	mg/kg	-	-	-	< 0.5
Coumaphos	2	mg/kg	-	-	-	< 2
Demeton-S	0.2	mg/kg	-	-	-	< 0.5
Demeton-O	0.2	mg/kg	-	-	-	< 0.5
Diazinon	0.2	mg/kg	-	-	-	< 0.5
Dichlorvos	0.2	mg/kg	-	-	-	< 0.5
Dimethoate	0.2	mg/kg	-	-	-	< 0.5
Disulfoton	0.2	mg/kg	-	-	-	< 0.5
EPN	0.2	mg/kg	-	-	-	< 0.5
Ethion	0.2	mg/kg	-	-	-	< 0.5
Ethoprop	0.2	mg/kg	-	-	-	< 0.5
Ethyl parathion	0.2	mg/kg	-	-	-	< 0.5
Fenitrothion	0.2	mg/kg	-	-	-	< 0.5
Fensulfothion	0.2	mg/kg	-	-	-	< 0.5
Fenthion	0.2	mg/kg	-	-	-	< 0.5
Malathion	0.2	mg/kg	-	-	-	< 0.5
Merphos	0.2	mg/kg	-	-	-	< 0.5
Methyl parathion	0.2	mg/kg	-	-	-	< 0.5
Mevinphos	0.2	mg/kg	-	-	-	< 0.5
Monocrotophos	2	mg/kg	-	-	-	< 2
Naled	0.2	mg/kg	-	-	-	< 0.5
Omethoate	2	mg/kg	-	-	-	< 2
Phorate	0.2	mg/kg	-	-	-	< 0.5
Pirimiphos-methyl	0.2	mg/kg	-	-	-	< 0.5
Pyrazophos	0.2	mg/kg	-	-	-	< 0.5
Ronnel	0.2	mg/kg	-	-	-	< 0.5
Terbufos	0.2	mg/kg	-	-	-	< 0.5
Tetrachlorvinphos	0.2	mg/kg	-	-	-	< 0.5
Tokuthion	0.2	mg/kg	-	-	-	< 0.5
Trichloronate	0.2	mg/kg	-	-	-	< 0.5
Triphenylphosphate (surr.)	1	%	-	-	-	INT
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	-	-	< 1
Aroclor-1221	0.1	mg/kg	-	-	-	< 1
Aroclor-1232	0.5	mg/kg	-	-	-	< 1
Aroclor-1242	0.5	mg/kg	-	-	-	< 1
Aroclor-1248	0.5	mg/kg	-	-	-	< 1
Aroclor-1254	0.5	mg/kg	-	-	-	< 1
Aroclor-1260	0.5	mg/kg	-	-	-	< 1
Total PCB*	0.5	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	121
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	106

Client Sample ID			GBH08_0.8-1.0	GBH06_0.0-0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-De15076	S20-De15077
Date Sampled			Dec 02, 2020	Dec 02, 2020
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	68
TRH C15-C28	50	mg/kg	52	280
TRH C29-C36	50	mg/kg	< 50	360
TRH C10-C36 (Total)	50	mg/kg	52	708
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	%	63	59
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	75
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	75
TRH >C16-C34	100	mg/kg	< 100	540
TRH >C34-C40	100	mg/kg	< 100	290
TRH >C10-C40 (total)*	100	mg/kg	< 100	905
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	%	96	117
p-Terphenyl-d14 (surr.)	1	%	110	138

Client Sample ID			GBH08_0.8-1.0	GBH06_0.0-0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-De15076	S20-De15077
Date Sampled			Dec 02, 2020	Dec 02, 2020
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	2	mg/kg	11	81
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	24	86
Copper	5	mg/kg	18	76
Lead	5	mg/kg	51	470
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	6.3	11
Zinc	5	mg/kg	45	180
% Moisture	1	%	31	17

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 09, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Dec 09, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Dec 08, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Dec 09, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Dec 09, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Dec 09, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 761999
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:45 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	BH11A	Dec 02, 2020		Soil	S20-De15072				X	X
2	QC1	Dec 02, 2020		Soil	S20-De15073				X	X
3	GBH02_0.4-0.6	Dec 02, 2020		Soil	S20-De15074				X	X
4	GBH08_0.0-0.1	Dec 02, 2020		Soil	S20-De15075	X		X	X	X
5	GBH08_0.8-1.0	Dec 02, 2020		Soil	S20-De15076				X	X
6	GBH06_0.0-0.1	Dec 02, 2020		Soil	S20-De15077	X			X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 761999
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:45 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
7	GBH08_0.3-0.4	Dec 02, 2020		Soil	S20-De15078		X			
8	GBH08_1.4-1.5	Dec 02, 2020		Soil	S20-De15079		X			
9	GBH08_1.9-2.0	Dec 02, 2020		Soil	S20-De15080		X			
10	GBH06_0.3-0.4	Dec 02, 2020		Soil	S20-De15081		X			
Test Counts						2	4	1	6	6

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

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

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total PCB*	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	88			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	85			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	93			70-130	Pass	
Acenaphthylene	%	110			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	98			70-130	Pass	
Benzo(a)pyrene	%	88			70-130	Pass	
Benzo(b&j)fluoranthene	%	86			70-130	Pass	
Benzo(g.h.i)perylene	%	88			70-130	Pass	
Benzo(k)fluoranthene	%	110			70-130	Pass	
Chrysene	%	91			70-130	Pass	
Dibenz(a.h)anthracene	%	84			70-130	Pass	
Fluoranthene	%	114			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	85			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
Phenanthrene	%	96			70-130	Pass	
Pyrene	%	102			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	100			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	99			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	100			80-120	Pass	
Mercury	%	106			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	95			80-120	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	111			70-130	Pass	
4.4'-DDD	%	116			70-130	Pass	
4.4'-DDE	%	99			70-130	Pass	
4.4'-DDT	%	111			70-130	Pass	
a-BHC	%	91			70-130	Pass	
Aldrin	%	93			70-130	Pass	
b-BHC	%	107			70-130	Pass	
d-BHC	%	89			70-130	Pass	
Dieldrin	%	115			70-130	Pass	
Endosulfan I	%	105			70-130	Pass	
Endosulfan II	%	108			70-130	Pass	
Endosulfan sulphate	%	101			70-130	Pass	
Endrin	%	121			70-130	Pass	
Endrin aldehyde	%	110			70-130	Pass	
Endrin ketone	%	104			70-130	Pass	
g-BHC (Lindane)	%	98			70-130	Pass	
Heptachlor	%	118			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor epoxide			%	122			70-130	Pass	
Hexachlorobenzene			%	92			70-130	Pass	
Methoxychlor			%	121			70-130	Pass	
LCS - % Recovery									
Organophosphorus Pesticides									
Diazinon			%	117			70-130	Pass	
Dimethoate			%	129			70-130	Pass	
Ethion			%	124			70-130	Pass	
Fenitrothion			%	129			70-130	Pass	
Methyl parathion			%	127			70-130	Pass	
Mevinphos			%	130			70-130	Pass	
LCS - % Recovery									
Polychlorinated Biphenyls									
Aroclor-1016			%	98			70-130	Pass	
Aroclor-1260			%	106			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-De15216	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-De15216	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-De13219	NCP	%	86			70-130	Pass	
Acenaphthylene	S20-De13219	NCP	%	89			70-130	Pass	
Anthracene	S20-De13219	NCP	%	100			70-130	Pass	
Benz(a)anthracene	S20-De13219	NCP	%	87			70-130	Pass	
Benzo(a)pyrene	S20-De13219	NCP	%	84			70-130	Pass	
Benzo(b&j)fluoranthene	S20-De13219	NCP	%	96			70-130	Pass	
Benzo(g.h.i)perylene	S20-De13219	NCP	%	82			70-130	Pass	
Benzo(k)fluoranthene	S20-De13219	NCP	%	100			70-130	Pass	
Chrysene	S20-De13219	NCP	%	100			70-130	Pass	
Dibenz(a.h)anthracene	S20-De13219	NCP	%	86			70-130	Pass	
Fluoranthene	S20-De13219	NCP	%	100			70-130	Pass	
Fluorene	S20-De13219	NCP	%	92			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-De13219	NCP	%	75			70-130	Pass	
Naphthalene	S20-De13219	NCP	%	92			70-130	Pass	
Phenanthrene	S20-De13219	NCP	%	96			70-130	Pass	
Pyrene	S20-De13219	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	W20-De13175	NCP	%	106			75-125	Pass	
Cadmium	W20-De13175	NCP	%	105			75-125	Pass	
Chromium	W20-De13175	NCP	%	93			75-125	Pass	
Copper	W20-De13175	NCP	%	90			75-125	Pass	
Lead	W20-De13175	NCP	%	94			75-125	Pass	
Mercury	W20-De13175	NCP	%	105			75-125	Pass	
Nickel	W20-De13175	NCP	%	93			75-125	Pass	
Zinc	W20-De13175	NCP	%	100			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-De15074	CP	%	71			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
BTEX				Result 1					
Benzene	S20-De15074	CP	%	79			70-130	Pass	
Toluene	S20-De15074	CP	%	77			70-130	Pass	
Ethylbenzene	S20-De15074	CP	%	76			70-130	Pass	
m&p-Xylenes	S20-De15074	CP	%	76			70-130	Pass	
o-Xylene	S20-De15074	CP	%	78			70-130	Pass	
Xylenes - Total*	S20-De15074	CP	%	77			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-De15074	CP	%	79			70-130	Pass	
TRH C6-C10	S20-De15074	CP	%	72			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-De17239	NCP	%	104			70-130	Pass	
4.4'-DDD	S20-De17239	NCP	%	115			70-130	Pass	
4.4'-DDE	S20-De17239	NCP	%	94			70-130	Pass	
4.4'-DDT	S20-De17239	NCP	%	116			70-130	Pass	
a-BHC	S20-De17239	NCP	%	85			70-130	Pass	
Aldrin	S20-De17239	NCP	%	90			70-130	Pass	
b-BHC	S20-De17239	NCP	%	101			70-130	Pass	
d-BHC	S20-De17239	NCP	%	85			70-130	Pass	
Dieldrin	S20-De17239	NCP	%	110			70-130	Pass	
Endosulfan I	S20-De17239	NCP	%	101			70-130	Pass	
Endosulfan II	S20-De17239	NCP	%	101			70-130	Pass	
Endosulfan sulphate	S20-De17239	NCP	%	92			70-130	Pass	
Endrin	S20-De22168	NCP	%	130			70-130	Pass	
Endrin aldehyde	S20-De16161	NCP	%	100			70-130	Pass	
Endrin ketone	S20-De17239	NCP	%	94			70-130	Pass	
g-BHC (Lindane)	S20-De17239	NCP	%	94			70-130	Pass	
Heptachlor	S20-De17239	NCP	%	114			70-130	Pass	
Heptachlor epoxide	S20-De17239	NCP	%	115			70-130	Pass	
Hexachlorobenzene	S20-De17239	NCP	%	88			70-130	Pass	
Methoxychlor	S20-De22168	NCP	%	119			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S20-De17239	NCP	%	129			70-130	Pass	
Dimethoate	S20-De17239	NCP	%	128			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S20-De17239	NCP	%	92			70-130	Pass	
Aroclor-1260	S20-De17239	NCP	%	106			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-De14952	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-De14952	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-De14952	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-De14952	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-De14952	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-De14952	NCP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-De21302	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-De11322	NCP	mg/kg	22	22	2.0	30%	Pass	
Cadmium	S20-De11322	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-De11322	NCP	mg/kg	34	30	10	30%	Pass	
Copper	S20-De11322	NCP	mg/kg	20	17	15	30%	Pass	
Lead	S20-De11322	NCP	mg/kg	24	24	3.0	30%	Pass	
Mercury	S20-De11322	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-De11322	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-De11322	NCP	mg/kg	13	14	7.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-De15073	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-De15073	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-De15073	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-De15073	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-De15073	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-De15073	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-De15073	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-De15073	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-De15073	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-De15074	CP	%	10	9.8	5.0	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-De19891	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Dieldrin	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-De19891	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-De19891	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-De18915	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-De18915	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S20-De18915	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-De18915	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S20-De22167	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S20-De22167	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S20-De22167	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S20-De22167	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1248	S20-De22167	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S20-De22167	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S20-De22167	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S20-De22167	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

This report has been revised (V2) to amend sample names.

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

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highwa
Chatswood
NSW 2067

Attention:	Simon Hay
Report	761999-AID-V2
Project Name	PENNANT HILLS ROAD
Project ID	SYDEN279944
Received Date	Dec 04, 2020
Date Reported	Dec 15, 2020

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 PENNANT HILLS ROAD
Project ID SYDEN279944
Date Sampled Dec 02, 2020
Report 761999-AID-V2

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
GBH08_0.0-0.1	20-De15075	Dec 02, 2020	Approximate Sample 59g Sample consisted of: Brown coarse-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GBH06_0.0-0.1	20-De15077	Dec 02, 2020	Approximate Sample 103g Sample consisted of: Brwon coarse-grained sandy soil, rocks, organic debris and bituminous material	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 and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Dec 08, 2020	Indefinite

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 761999
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:45 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	BH11A	Dec 02, 2020		Soil	S20-De15072				X	X
2	QC1	Dec 02, 2020		Soil	S20-De15073				X	X
3	GBH02_0.4-0.6	Dec 02, 2020		Soil	S20-De15074				X	X
4	GBH08_0.0-0.1	Dec 02, 2020		Soil	S20-De15075	X		X	X	X
5	GBH08_0.8-1.0	Dec 02, 2020		Soil	S20-De15076				X	X
6	GBH06_0.0-0.1	Dec 02, 2020		Soil	S20-De15077	X			X	X

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 761999
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 4, 2020 10:45 AM
Due: Dec 11, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271										
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
Mayfield Laboratory										
External Laboratory										
7	GBH08_0.3-0.4	Dec 02, 2020		Soil	S20-De15078		X			
8	GBH08_1.4-1.5	Dec 02, 2020		Soil	S20-De15079		X			
9	GBH08_1.9-2.0	Dec 02, 2020		Soil	S20-De15080		X			
10	GBH06_0.3-0.4	Dec 02, 2020		Soil	S20-De15081		X			
Test Counts						2	4	1	6	6

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

This report has been revised (V2) to amend sample names.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

#AU04_Enviro_Sample_NSW

Subject: FW: TCLP analysis
Attachments: 761999-S_report.pdf; 762036-S_report.pdf

From: Hay, Simon <Simon.Hay@coffey.com>
Sent: Monday, 14 December 2020 1:22 PM
To: Ursula Long <UrsulaLong@eurofins.com>
Subject: TCLP analysis

EXTERNAL EMAIL*

Hi Ursula,

Could I please request TCLP on the following on a 5 day TAT:

GBH02_0.4-0.6 – Nickel
BGH06_0.0-0.1 – Lead
TP09_0.0-0.1 – Lead
TP11A – Lead

Kind Regards,

Simon Hay
Senior Environmental Scientist

Level 20, Tower B - Citadel Tower
799 Pacific Highway Chatswood NSW 2067

t: +61 2 9406 1060
f: +61 2 9406 1002
m: 0424 703 009
w: coffey.com

>>> **Ingenuity@coffey** – it's the ideas that count


Please consider the environment before printing this email

Ursula Long

From: #AU04_Enviro_Sample_NSW
Sent: Wednesday, 16 December 2020 8:35 AM
To: Ursula Long
Subject: FW: Eurofins Sample Receipt Advice - Report 763628 : Site ADDITIONAL PENNANT HILLS ROAD (SYDEN279944)
Attachments: 763628_COC.pdf; 763628_sample_receipt_coc.pdf; 763628_summary.pdf

Kind regards,
Grace Tuckwell

Enviro Sample NSW
Sample Receipt NSW

Eurofins | Environment Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone : +61 2 9900 8421

Email : EnviroSampleNSW@Eurofins.com
Website: www.eurofins.com.au/environmental-testing

From: Hay, Simon <Simon.Hay@coffey.com>
Sent: Wednesday, 16 December 2020 7:44 AM
To: #AU04_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>
Subject: FW: Eurofins Sample Receipt Advice - Report 763628 : Site ADDITIONAL PENNANT HILLS ROAD (SYDEN279944)

Hi Grace,

Is it possible to change this to a 3 day turn around time?

Thanks
Simon

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Tuesday, December 15, 2020 1:27 AM
To: Hay, Simon <Simon.Hay@coffey.com>
Subject: Eurofins Sample Receipt Advice - Report 763628 : Site ADDITIONAL PENNANT HILLS ROAD (SYDEN279944)

Dear Valued Client,

Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Sample Receipt Advice

Company name:	Coffey Environments Pty Ltd NSW
Contact name:	Simon Hay
Project name:	ADDITIONAL PENNANT HILLS ROAD
Project ID:	SYDEN279944
Turnaround time:	3 Day
Date/Time received	Dec 14, 2020 1:22 PM
Eurofins reference	763628

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 6.5 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Simon Hay - simon.hay@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd NSW email address.

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: ADDITIONAL PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 763628
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 14, 2020 1:22 PM
Due: Dec 17, 2020
Priority: 3 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Lead	Nickel	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	BH11A	Dec 02, 2020		US Leachate	S20-De28752	X		X
2	GBH02_0.4-0.6	Dec 02, 2020		US Leachate	S20-De28753		X	X
3	BGH06_0.0-0.1	Dec 02, 2020		US Leachate	S20-De28754	X		X
4	BH09_0.0-0.1	Dec 01, 2020		US Leachate	S20-De28755	X		X
Test Counts						3	1	4

eurofins | Environment Testing

Certificate of Analysis

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Simon Hay**

Report **763628-L-V3**
Project name ADDITIONAL PENNANT HILLS ROAD
Project ID SYDEN279944
Received Date Dec 14, 2020

Client Sample ID			**BH11A**	**GBH02_0.4-0.6**	**BGH06_0.0-0.1**	**BH09_0.0-0.1**
Sample Matrix			**US Leachate**	**US Leachate**	**US Leachate**	**US Leachate**
Eurofins Sample No.			**S20-De28752**	**S20-De28753**	**S20-De28754**	**S20-De28755**
Date Sampled			**Dec 02, 2020**	**Dec 02, 2020**	**Dec 02, 2020**	**Dec 01, 2020**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	0.01	mg/L	0.07	-	0.22	0.03
Nickel	0.01	mg/L	-	0.17	-	-
USA Leaching Procedure						
Leachate Fluid[C01]		comment	1.0	1.0	1.0	1.0
pH (initial)	0.1	pH Units	8.3	8.3	7.7	8.1
pH (off)	0.1	pH Units	5.3	5.2	5.1	5.1
pH (USA HCl addition)	0.1	pH Units	1.7	1.7	1.7	1.7

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Heavy Metals	Sydney	Dec 17, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
USA Leaching Procedure	Sydney	Dec 16, 2020	14 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: ADDITIONAL PENNANT HILLS ROAD
Project ID: SYDEN279944

Order No.:
Report #: 763628
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 14, 2020 1:22 PM
Due: Dec 17, 2020
Priority: 3 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Lead	Nickel	USA Leaching Procedure
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	BH11A	Dec 02, 2020		US Leachate	S20-De28752	X		X
2	GBH02_0.4-0.6	Dec 02, 2020		US Leachate	S20-De28753		X	X
3	BGH06_0.0-0.1	Dec 02, 2020		US Leachate	S20-De28754	X		X
4	BH09_0.0-0.1	Dec 01, 2020		US Leachate	S20-De28755	X		X
Test Counts						3	1	4

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Lead	mg/L	< 0.01			0.01	Pass	
Nickel	mg/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Heavy Metals							
Lead	%	95			80-120	Pass	
Nickel	%	98			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S20-De26037	NCP	%	94			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Nickel	S20-De26037	NCP	%	96			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S20-De26032	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel	S20-De26032	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

This report has been revised (V2) to amend sample name for S20-De28755.

This report has been revised (V2) to amend sample name for S20-De28752.

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Ursula Long	Analytical Services Manager
John Nguyen	Senior Analyst-Metal (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of ___ 6065

coffey
A TETRA TECH COMPANY SYDEN -

Consigning Office: Chatswood

Report Results to: Mobile: Email: @coffey.com

Invoices to: Phone: Email: @coffey.com

Project No: 279944 Task No:

Project Name: Pennant Hills Rd Laboratory: Eurofins

Sampler's Name: S. Hong Project Manager: S. Hong

Special Instructions: 5 DAY TAT

Analysis Request Section

Lab No.	Sample ID	Sample Date	Time	Matrix (Soil...etc)	Container Type & Preservative*	T-A-T (specify)	BT	BH Asbestos	NEPM	NOTES
	K2	9-12		~~Amber Vial~~ Water	Amber Vial	5 Day	✓			
	GBH03_0.3_0.4	9-12		Soil	Jar 5 Day	5 DAY	✓			
	GBH03_0.9_1.0				Jar only				✓	
	GBH04_0.6_0.7						✓			
	GBH04_1.3_1.4				Jar only					
	GBH05_0.15_0.2				Jar only					
	GBH05_0.2_0.3						✓			

RELINQUISHED BY

Name: S. Hong Date: 10.12.20

Coffey Environments Time:

Name: Date:

Company: Time:

RECEIVED BY

Name: NR Date: 11/12/20

Company: Eurofins Time: 2:45 pm

Name: Date:

Company: Time:

Sample Receipt Advice: (Lab Use Only) courier

All Samples Recieved in Good Condition ☑

All Documentation is in Proper Order ☑

Samples Received Properly Chilled 14.9°C ☑

Lab. Ref/Batch No. 763 264

***Container Type & Preservation Codes:** **P** - Plastic, **G**- Glass Bottle, **J** - Glass Jar, **V**- Vial, **Z** - Ziplock Bag, **N** - Nitric Acid Preserved, **C** - Hydrochloric Acid Preserved, **S** - Sulphuric Acid Preserved, **I** - Ice, **ST** - Sodium Thiosulfate, **NP** - No Preservative, **OP** - Other Preservative

GOWANS PRINTING (02) 9755 3545

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Sample Receipt Advice

Company name:	Coffey Geotechnics Pty Ltd Chatswood
Contact name:	Simon Hay
Project name:	PENNANT HILLS RD
Project ID:	SYDEN279944
Turnaround time:	5 Day
Date/Time received	Dec 11, 2020 2:45 PM
Eurofins reference	763264

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 14.9 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Simon Hay - simon.hay@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Geotechnics Pty Ltd Chatswood email address.

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS RD
Project ID: SYDEN279944

Order No.:
Report #: 763264
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 11, 2020 2:45 PM
Due: Dec 18, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						HOLD	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	R2	Dec 09, 2020		Water	S20-De26196			X
2	GBH03_0.3-0.4	Dec 09, 2020		Soil	S20-De26197		X	X
3	GBH04_0.6-0.7	Dec 09, 2020		Soil	S20-De26198		X	X
4	GBH05_0.2-0.3	Dec 09, 2020		Soil	S20-De26199		X	X
5	GBH03_0.9-1.0	Dec 09, 2020		Soil	S20-De26200	X		
6	GBH04_1.3-1.4	Dec 09, 2020		Soil	S20-De26201	X		

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS RD
Project ID: SYDEN279944

Order No.:
Report #: 763264
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 11, 2020 2:45 PM
Due: Dec 18, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						HOLD	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
7	GBH05_0.15-0.2	Dec 09, 2020		Soil	S20-De26202	X		
Test Counts						3	3	4

Coffey Geotechnics Pty Ltd Chatswood
Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: **Simon Hay**

Report **763264-S**
Project name PENNANT HILLS RD
Project ID SYDEN279944
Received Date Dec 11, 2020

Client Sample ID			**GBH03_0.3-0.4**	**GBH04_0.6-0.7**	**GBH05_0.2-0.3**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-De26197**	**S20-De26198**	**S20-De26199**
Date Sampled			**Dec 09, 2020**	**Dec 09, 2020**	**Dec 09, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	58	60	79
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			GBH03_0.3-0.4	GBH04_0.6-0.7	GBH05_0.2-0.3
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-De26197**	**S20-De26198**	**S20-De26199**
Date Sampled			**Dec 09, 2020**	**Dec 09, 2020**	**Dec 09, 2020**
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	113	105	133
p-Terphenyl-d14 (surr.)	1	%	114	111	102
Heavy Metals					
Arsenic	2	mg/kg	< 2	2.0	3.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.4	8.8	9.8
Copper	5	mg/kg	11	< 5	< 5
Lead	5	mg/kg	9.1	11	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5
Zinc	5	mg/kg	13	22	24
% Moisture	1	%	24	24	13

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 17, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 17, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 17, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 17, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 17, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Dec 17, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Dec 11, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS RD
Project ID: SYDEN279944

Order No.:
Report #: 763264
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 11, 2020 2:45 PM
Due: Dec 18, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						HOLD	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	R2	Dec 09, 2020		Water	S20-De26196			X
2	GBH03_0.3-0.4	Dec 09, 2020		Soil	S20-De26197		X	X
3	GBH04_0.6-0.7	Dec 09, 2020		Soil	S20-De26198		X	X
4	GBH05_0.2-0.3	Dec 09, 2020		Soil	S20-De26199		X	X
5	GBH03_0.9-1.0	Dec 09, 2020		Soil	S20-De26200	X		
6	GBH04_1.3-1.4	Dec 09, 2020		Soil	S20-De26201	X		

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS RD
Project ID: SYDEN279944

Order No.:
Report #: 763264
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 11, 2020 2:45 PM
Due: Dec 18, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						HOLD	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
7	GBH05_0.15-0.2	Dec 09, 2020		Soil	S20-De26202	X		
Test Counts						3	3	4

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
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	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	84			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	%	83			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	92			70-130	Pass	
Toluene	%	88			70-130	Pass	
Ethylbenzene	%	92			70-130	Pass	
m&p-Xylenes	%	91			70-130	Pass	
o-Xylene	%	90			70-130	Pass	
Xylenes - Total*	%	91			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	115			70-130	Pass	
TRH C6-C10	%	81			70-130	Pass	
TRH >C10-C16	%	84			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	70			70-130	Pass	
Acenaphthylene	%	95			70-130	Pass	
Anthracene	%	84			70-130	Pass	
Benz(a)anthracene	%	92			70-130	Pass	
Benzo(a)pyrene	%	90			70-130	Pass	
Benzo(b&j)fluoranthene	%	89			70-130	Pass	
Benzo(g.h.i)perylene	%	93			70-130	Pass	
Benzo(k)fluoranthene	%	86			70-130	Pass	
Chrysene	%	79			70-130	Pass	
Dibenz(a.h)anthracene	%	86			70-130	Pass	
Fluoranthene	%	74			70-130	Pass	
Fluorene	%	77			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	86			70-130	Pass	
Naphthalene	%	80			70-130	Pass	
Phenanthrene	%	72			70-130	Pass	
Pyrene	%	89			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	101			80-120	Pass	
Chromium	%	100			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	102			80-120	Pass	
Mercury	%	104			80-120	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	101			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-De22703	NCP	%	103			70-130	Pass	
TRH C10-C14	S20-De33068	NCP	%	119			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-De22703	NCP	%	88			70-130	Pass	
Toluene	S20-De22703	NCP	%	82			70-130	Pass	
Ethylbenzene	S20-De22703	NCP	%	87			70-130	Pass	
m&p-Xylenes	S20-De22703	NCP	%	87			70-130	Pass	
o-Xylene	S20-De22703	NCP	%	86			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Xylenes - Total*	S20-De22703	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-De22703	NCP	%	119			70-130	Pass	
TRH C6-C10	S20-De17875	NCP	%	70			70-130	Pass	
TRH >C10-C16	S20-De33068	NCP	%	130			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-De36803	NCP	%	73			70-130	Pass	
Acenaphthylene	S20-De36803	NCP	%	97			70-130	Pass	
Anthracene	S20-De36803	NCP	%	121			70-130	Pass	
Benz(a)anthracene	S20-De36803	NCP	%	88			70-130	Pass	
Benzo(a)pyrene	S20-De36803	NCP	%	98			70-130	Pass	
Benzo(b&j)fluoranthene	S20-De36803	NCP	%	77			70-130	Pass	
Benzo(g.h.i)perylene	S20-De36803	NCP	%	71			70-130	Pass	
Benzo(k)fluoranthene	S20-De36803	NCP	%	89			70-130	Pass	
Chrysene	S20-De36803	NCP	%	79			70-130	Pass	
Dibenz(a.h)anthracene	S20-De36803	NCP	%	72			70-130	Pass	
Fluoranthene	S20-De36803	NCP	%	83			70-130	Pass	
Fluorene	S20-De36803	NCP	%	77			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-De36803	NCP	%	70			70-130	Pass	
Naphthalene	S20-De36803	NCP	%	90			70-130	Pass	
Phenanthrene	S20-De36803	NCP	%	80			70-130	Pass	
Pyrene	S20-De36803	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-De33856	NCP	%	124			75-125	Pass	
Cadmium	S20-De33856	NCP	%	115			75-125	Pass	
Chromium	S20-De36233	NCP	%	111			75-125	Pass	
Copper	S20-De33856	NCP	%	125			75-125	Pass	
Lead	S20-De33856	NCP	%	118			75-125	Pass	
Mercury	S20-De33856	NCP	%	118			75-125	Pass	
Nickel	S20-De33856	NCP	%	115			75-125	Pass	
Zinc	S20-De36233	NCP	%	118			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-De26197	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-De26197	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-De26197	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-De26197	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-De26197	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-De26197	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-De26197	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-De26197	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-De26197	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-De26197	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-De26197	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-De26197	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-De26197	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-De26197	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-De26197	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-De33067	NCP	mg/kg	< 2	4.7	100	30%	Fail	Q15
Cadmium	S20-De33067	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-De33940	NCP	mg/kg	11	12	2.0	30%	Pass	
Copper	S20-De33067	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S20-De33067	NCP	mg/kg	9.6	14	39	30%	Fail	Q15
Mercury	S20-De33067	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-De33067	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-De33067	NCP	mg/kg	21	22	5.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-De26199	CP	%	13	12	7.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Coffey Geotechnics Pty Ltd Chatswood
Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: **Simon Hay**

Report **763264-W**
Project name PENNANT HILLS RD
Project ID SYDEN279944
Received Date Dec 11, 2020

Client Sample ID			**R2**
Sample Matrix			**Water**
Eurofins Sample No.			**S20-De26196**
Date Sampled			**Dec 09, 2020**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	103
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001

Client Sample ID			R2
Sample Matrix			**Water**
Eurofins Sample No.			**S20-De26196**
Date Sampled			**Dec 09, 2020**
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001
Total PAH*	0.001	mg/L	< 0.001
2-Fluorobiphenyl (surr.)	1	%	INT
p-Terphenyl-d14 (surr.)	1	%	INT
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Dec 11, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 11, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 11, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 11, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 11, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Dec 11, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS RD
Project ID: SYDEN279944

Order No.:
Report #: 763264
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 11, 2020 2:45 PM
Due: Dec 18, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						HOLD	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	R2	Dec 09, 2020		Water	S20-De26196			X
2	GBH03_0.3-0.4	Dec 09, 2020		Soil	S20-De26197		X	X
3	GBH04_0.6-0.7	Dec 09, 2020		Soil	S20-De26198		X	X
4	GBH05_0.2-0.3	Dec 09, 2020		Soil	S20-De26199		X	X
5	GBH03_0.9-1.0	Dec 09, 2020		Soil	S20-De26200	X		
6	GBH04_1.3-1.4	Dec 09, 2020		Soil	S20-De26201	X		

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Geotechnics Pty Ltd Chatswood
Address: Level 18, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: PENNANT HILLS RD
Project ID: SYDEN279944

Order No.:
Report #: 763264
Phone: +61 2 9406 1000
Fax: +61 2 9406 1002

Received: Dec 11, 2020 2:45 PM
Due: Dec 18, 2020
Priority: 5 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						HOLD	Moisture Set	Eurofins Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
7	GBH05_0.15-0.2	Dec 09, 2020		Soil	S20-De26202	X		
Test Counts						3	3	4

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	81			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	%	74			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	96			70-130	Pass	
Toluene	%	89			70-130	Pass	
Ethylbenzene	%	89			70-130	Pass	
m&p-Xylenes	%	92			70-130	Pass	
o-Xylene	%	81			70-130	Pass	
Xylenes - Total*	%	88			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	89			70-130	Pass	
TRH C6-C10	%	78			70-130	Pass	
TRH >C10-C16	%	76			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	81			70-130	Pass	
Acenaphthylene	%	84			70-130	Pass	
Anthracene	%	79			70-130	Pass	
Benz(a)anthracene	%	75			70-130	Pass	
Benzo(a)pyrene	%	89			70-130	Pass	
Benzo(b&j)fluoranthene	%	85			70-130	Pass	
Benzo(g.h.i)perylene	%	85			70-130	Pass	
Benzo(k)fluoranthene	%	102			70-130	Pass	
Chrysene	%	82			70-130	Pass	
Dibenz(a.h)anthracene	%	85			70-130	Pass	
Fluoranthene	%	82			70-130	Pass	
Fluorene	%	82			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	85			70-130	Pass	
Naphthalene	%	85			70-130	Pass	
Phenanthrene	%	79			70-130	Pass	
Pyrene	%	83			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	
Cadmium	%	103			80-120	Pass	
Chromium	%	107			80-120	Pass	
Copper	%	101			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	118			80-120	Pass	
Nickel	%	106			80-120	Pass	
Zinc	%	104			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-De25249	NCP	%	78			70-130	Pass	
TRH C10-C14	S20-De09331	NCP	%	79			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-De25249	NCP	%	104			70-130	Pass	
Toluene	S20-De25249	NCP	%	103			70-130	Pass	
Ethylbenzene	S20-De25249	NCP	%	102			70-130	Pass	
m&p-Xylenes	S20-De25249	NCP	%	102			70-130	Pass	
o-Xylene	S20-De25249	NCP	%	91			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Xylenes - Total*	S20-De25249	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-De25249	NCP	%	92			70-130	Pass	
TRH C6-C10	S20-De25249	NCP	%	77			70-130	Pass	
TRH >C10-C16	S20-De09331	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-De33534	NCP	%	103			75-125	Pass	
Cadmium	S20-De33534	NCP	%	105			75-125	Pass	
Chromium	S20-De33534	NCP	%	109			75-125	Pass	
Copper	S20-De33534	NCP	%	103			75-125	Pass	
Lead	S20-De33534	NCP	%	107			75-125	Pass	
Mercury	S20-De33534	NCP	%	116			75-125	Pass	
Nickel	S20-De33534	NCP	%	108			75-125	Pass	
Zinc	S20-De33534	NCP	%	102			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-De25246	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S20-De25246	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S20-De25246	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S20-De25246	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-De25246	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S20-De25246	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-De25246	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S20-De25246	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S20-De25246	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S20-De25246	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S20-De25246	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Phenanthrene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S20-De25246	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-De30812	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S20-De30812	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-De30812	NCP	mg/L	0.029	0.027	6.0	30%	Pass	
Copper	S20-De30812	NCP	mg/L	0.004	0.004	19	30%	Pass	
Lead	S20-De33530	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-De30812	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-De30812	NCP	mg/L	0.003	0.003	3.0	30%	Pass	
Zinc	S20-De30812	NCP	mg/L	0.020	0.024	15	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

#AU04_Enviro_Sample_NSW

Subject: FW: Sample results BH13_0.5_0.6

Importance: High

From: Hay, Simon <Simon.Hay@coffey.com>
Sent: Tuesday, 22 December 2020 2:33 PM
To: Ursula Long <UrsulaLong@eurofins.com>
Subject: RE: Sample results BH13_0.5_0.6

EXTERNAL EMAIL*

Hi Ursula,

As discussed, could you please schedule TCLP analysis for PAHs and silica gel clean-up on sample BH13-0.5-0.6 on fastest turn around please?

Kind regards
Simon

From: Hay, Simon
Sent: Tuesday, 22 December 2020 1:39 PM
To: UrsulaLong@eurofins.com
Subject: Sample results BH13_0.5_0.6

Hi Ursula,

How are you? I was wondering if you had a couple minutes to discuss some sample results for PAHs relating to sample BH13-0.5-0.6, I just had a couple questions. I see that there was matrix interference relating to the sample, but the concentrations of BaP were 90mg/kg but the total PAH's were reported as <0.5mg/kg.

The sample was collected on 24/11/2020 - would this be outside the holding time for TCLP analysis of PAHs?

Kind Regards,

Simon Hay
Senior Environmental Scientist

Level 20, Tower B - Citadel Tower
799 Pacific Highway Chatswood NSW 2067

t: +61 2 9406 1060
f: +61 2 9406 1002
m: 0424 703 009
w: coffey.com

>>> **Ingenuity@coffey** – it's the ideas that count

Please consider the environment before printing this email

Click here to report this email as spam.

ScannedByWebsenseForEurofins

* WARNING - EXTERNAL: This email originated from outside of Eurofins. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Sample Receipt Advice

Company name:	Coffey Environments Pty Ltd NSW
Contact name:	Simon Hay
Project name:	ADDITIONAL PENNANT HILLS ROAD
Project ID:	754-SYDEN279944
Turnaround time:	1 Day
Date/Time received	Dec 22, 2020 2:33 PM
Eurofins reference	765392

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 17.4 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Simon Hay - simon.hay@coffey.com.

Note: A copy of these results will also be delivered to the general Coffey Environments Pty Ltd NSW email address.

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: ADDITIONAL PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 765392
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 22, 2020 2:33 PM
Due: Dec 23, 2020
Priority: 1 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Polycyclic Aromatic Hydrocarbons	USA Leaching Procedure	TRH (after Silica Gel cleanup)	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	BH13-0.5-0.6	Nov 23, 2020		Soil	S20-De47536			X	X
2	BH13-0.5-0.6	Nov 23, 2020		US Leachate	S20-De47539	X	X		
Test Counts						1	1	1	1

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: **Simon Hay**

Report **765392-S**
Project name ADDITIONAL PENNANT HILLS ROAD
Project ID 754-SYDEN279944
Received Date Dec 22, 2020

Client Sample ID			**BH13-0.5-0.6**
Sample Matrix			**Soil**
Eurofins Sample No.			**S20-De47536**
Date Sampled			**Nov 23, 2020**
Test/Reference	LOR	Unit	
TRH - 2013 NEPM Fractions (after silica gel clean-up)			
TRH >C10-C16 (after silica gel clean-up)	50	mg/kg	88
TRH >C16-C34 (after silica gel clean-up)	100	mg/kg	2100
TRH >C34-C40 (after silica gel clean-up)	100	mg/kg	200
TRH - 1999 NEPM Fractions (after silica gel clean-up)			
TRH C10-C36 (Total) (after silica gel clean-up)	50	mg/kg	2350
TRH C10-C14 (after silica gel clean-up)	50	mg/kg	< 50
TRH C15-C28 (after silica gel clean-up)	100	mg/kg	1500
TRH C29-C36 (after silica gel clean-up)	100	mg/kg	850
% Moisture	1	%	4.2

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Sydney	Dec 22, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Sydney	Dec 22, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
% Moisture	Sydney	Dec 22, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: ADDITIONAL PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 765392
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 22, 2020 2:33 PM
Due: Dec 23, 2020
Priority: 1 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Polycyclic Aromatic Hydrocarbons	USA Leaching Procedure	TRH (after Silica Gel cleanup)	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	BH13-0.5-0.6	Nov 23, 2020		Soil	S20-De47536			X	X
2	BH13-0.5-0.6	Nov 23, 2020		US Leachate	S20-De47539	X	X		
Test Counts						1	1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	102			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	102			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-De47046	NCP	%	19	20	4.0	30%	Pass	

Comments

Sample Integrity

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

Authorised By

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

Coffey Environments Pty Ltd NSW
Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Attention: **Simon Hay**

Report **765392-L**
Project name ADDITIONAL PENNANT HILLS ROAD
Project ID 754-SYDEN279944
Received Date Dec 22, 2020

Client Sample ID			**BH13-0.5-0.6**
Sample Matrix			**US Leachate**
Eurofins Sample No.			**S20-De47539**
Date Sampled			**Nov 23, 2020**
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	0.002
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001
Total PAH*	0.001	mg/L	0.002
2-Fluorobiphenyl (surr.)	1	%	95
p-Terphenyl-d14 (surr.)	1	%	INT
USA Leaching Procedure			
Leachate Fluid[C01]		comment	1.0
pH (initial)	0.1	pH Units	8.8
pH (off)	0.1	pH Units	5.5
pH (USA HCl addition)	0.1	pH Units	1.7

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 22, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
USA Leaching Procedure	Sydney	Dec 22, 2020	14 Days
- Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes			

eurofins | Environment Testing

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

Australia

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

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

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

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

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

New Zealand

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

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

Company Name: Coffey Environments Pty Ltd NSW
Address: Level 20, Tower B, Citadel Tower 799 Pacific Highway
Chatswood
NSW 2067

Project Name: ADDITIONAL PENNANT HILLS ROAD
Project ID: 754-SYDEN279944

Order No.:
Report #: 765392
Phone: +61 2 9406 1000
Fax: +61 2 9406 1004

Received: Dec 22, 2020 2:33 PM
Due: Dec 23, 2020
Priority: 1 Day
Contact Name: Simon Hay

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Polycyclic Aromatic Hydrocarbons	USA Leaching Procedure	TRH (after Silica Gel cleanup)	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	BH13-0.5-0.6	Nov 23, 2020		Soil	S20-De47536			X	X
2	BH13-0.5-0.6	Nov 23, 2020		US Leachate	S20-De47539	X	X		
Test Counts						1	1	1	1

eurofins | Environment Testing

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	93			70-130	Pass	
Anthracene	%	91			70-130	Pass	
Benz(a)anthracene	%	89			70-130	Pass	
Benzo(a)pyrene	%	81			70-130	Pass	
Benzo(b&j)fluoranthene	%	81			70-130	Pass	
Benzo(g.h.i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	95			70-130	Pass	
Chrysene	%	98			70-130	Pass	
Dibenz(a.h)anthracene	%	73			70-130	Pass	
Fluoranthene	%	100			70-130	Pass	
Fluorene	%	93			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	73			70-130	Pass	
Naphthalene	%	96			70-130	Pass	
Phenanthrene	%	97			70-130	Pass	
Pyrene	%	101			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Indeno(1.2.3-cd)pyrene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S20-De42868	NCP	mg/L	< 0.001	< 0.001	<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
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other
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

Ursula Long	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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