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Report Type:

Detailed Site Investigation

Project Address:

Western Sydney University – Milperra Campus,
Bullecourt Avenue, Milperra, NSW 2214
Lot 103 DP874035

Client Name:

Mirvac Residential (NSW) Developments Pty Ltd

30 January 2020
Report No: 9996-ER-1-1

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PO Box 275, Seven Hills NSW 1730 - 10 Welder Road, Seven Hills, NSW

Phone: 1800 288 188 - Office Email: office@allgeo.com.au - Web: allgeo.com.au

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Author Signature		**Reviewer Signature**	
Name	Sam Scully	**Name**	Aidan Rooney
Title	Environmental Scientist	**Title**	Principal Environmental Scientist

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EXECUTIVE SUMMARY

Alliance Geotechnical Pty Ltd (AG) was engaged by Mirvac Homes NSW Pty Ltd, to undertake a Stage 2 Detailed Site Investigation for a site located at Western Sydney University – Milperra Campus Bullecourt Avenue, Milperra, NSW 2214 (refer **Figure 1** with the 'site' boundaries outlined in **Figure 2**).

AG had the following project appreciation:

- the site is an active campus of Western Sydney University;
- the investigation is to be limited to areas outside of building structures and discretion is required in active areas of the site (roads, ovals and carparking areas);
- the site is proposed for rezoning and subdivision to facilitate residential development. It is understood that this will comprise demolition of the existing university campus and construction of a low-density residential development; and
- a Detailed Site Investigation is required, in accordance with *State Environmental Planning Policy No. 55 – Remediation of Land,* to accompany the development application.

It is the intention of the client to redevelop the site into a low-density residential development. This is deemed as a change of land-use from commercial / industrial to a residential land use scenario. The site current falls within a Infrastructure (SP2) in accordance with Canterbury Bankstown Local Environment Plan (2015). Currently under the State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55), a consent authority must not consent to the carrying out of any development unless it has considered whether the land is contaminated. This report has been prepared to satisfy Clause 7 (2) and (3) of SEPP 55 and Canterbury Bankstown Council planning policies.

The objectives of this project were to:

- assess the potential for contamination to be present on the site in available/ accessible areas as a result of past and current land use activities;
- provide advice on whether the site would be suitable (in the context of land contamination) for the proposed land use setting; and
- provide recommendations for further investigation, management and/or remediation (if warranted).

AG undertook the following scope of works to address the project objectives:

- A desktop review of the previous investigation reports and other relevant information relating to the site;
- A site walkover to understand current site conditions and conduct underground utility locating;
- Conduct an intrusive site investigation using a track-mounted hydraulic drill rig, hand auger and/or track-mounted excavator to assess subsurface ground conditions and install groundwater monitoring wells;
- Collect representative soil and groundwater samples;
- Facilitate laboratory analysis of selected soil and groundwater samples for contaminates of potential concern (CoPC);
- Assess the results in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013* (NEPM 2013); and

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- Prepare a SDSI in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites, 2011.*

Conclusions and Recommendations

Based on AG's assessment of the desktop review information, fieldwork data and laboratory analytical results, in the context of the proposed redevelopment scenario, AG makes the following conclusions:

Soil Assessment

- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable direct contact human health exposure risk;
- the detected concentrations of asbestos fines/ friable asbestos and non-friable asbestos containing material in the soil samples analysed are considered likely to present an unacceptable human health exposure risk;
- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable inhalation / vapour intrusion exposure risk;
- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable TPH management limit exposure risk; and
- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable aesthetics risk;

Groundwater Assessment

- the detected concentrations of contaminants of potential concern in groundwater are considered unlikely to present a risk to surrounding aquatic environments;
- All groundwater samples returned concentrations less than the adopted Groundwater Health Screening Levels for vapour intrusion (clay 2 - 4m) for a residential land use setting as per Table 1A (4) of NEPM 2013
- the detected concentrations of contaminants of potential concern in the groundwater samples analysed is considered unsuitable for discharge to municipal stormwater without further assessment/treatment due to the detected concentrations of the contaminants of concern analysed.

Based on these conclusions, AG makes the following recommendations:

- Consideration should be given to the preparation of a supplementary contamination assessment, to further understand the nature and extent of contamination identified onsite and address data gaps presented by building footprints, previous contamination assessments and inaccessible areas of environmental concern;
- Preparation of a remedial action plan (RAP) will be required to detail the works needed to adequately delineate, remediate and validate the areas of concern that present an unacceptable contamination risk;
- groundwater assessed at the site is unsuitable for discharge to municipal stormwater without further assessment/treatment due to the detected concentrations of the contaminants of concern tested. If groundwater is expected to be encountered during the proposed development, a groundwater management plan would be required;

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- the preparation of any supplementary contamination assessments, remedial action plans and/or groundwater management plans should be completed by an appropriately experienced environmental consultant;
- As per NSW WHS Regulations, any removal of friable asbestos requires the engagement of a Class A licensed asbestos removalist and a pre-notification to SafeWork NSW, with accompanying air monitoring during the works and clearances post completion to be conducted by a licensed asbestos assessor (LAA);
- Following remediation of the identified contamination, validation sampling and a site validation report will be required to confirm the effectiveness of the remedial works; and
- Any soil proposed for disposal should be classified and disposed of as per the NSW EPA *Waste Classification Guidelines*, 2014 with all disposal documentation retained by the client for inclusion within the site validation report.

This report, including its conclusions and recommendations, must be read in conjunction with the limitations presented in **Section 14**.

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LIST OF ABBREVIATIONS

A list of the common abbreviations used throughout this report is provided below:

ACM	Asbestos Containing Material
AF/FA	Asbestos Fines / Fibrous Asbestos
AEC	Area of Environmental Concern
AG	Alliance Geotechnical Pty Ltd
AHD	Australian Height Datum
B(a)P TEQ	Benzo(a)pyrene Toxic Equivalence Quotient
BTEX	Benzene, toluene, ethyl benzene and xylenes
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DSI	Detailed Site Investigation
DP	Deposited Plan
EPA	NSW Environment Protection Authority
m	metres
m^2	square metres
m bgl	metres below ground level
mg/kg	milligrams per kilogram
OCP	Organochlorine pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PSI	Preliminary Site Investigation
RAP	Remedial Action Plan
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit

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1. INTRODUCTION

1.1. Background

Alliance Geotechnical Pty Ltd (AG) was engaged by Mirvac Homes NSW Pty Ltd, to undertake a Stage 2 Detailed Site Investigation for the site located at Western Sydney University – Milperra Campus, Bullecourt Avenue, Milperra, NSW 2214 (refer **Figure 1** with the 'site' boundaries outlined in **Figure 2**).

AG had the following project appreciation:

- the site is an active campus of Western Sydney University;
- the investigation is to be limited to areas outside of building structures and discretion is required in active areas of the site (roads, ovals and carparking areas);
- the site is proposed for rezoning and subdivision to facilitate residential development. It is understood that this will comprise demolition of the existing university campus and construction of a low-density residential development; and
- a Detailed Site Investigation is required, in accordance with *State Environmental Planning Policy No. 55 – Remediation of Land,* to accompany the development application.

1.2. Proposed development

It is the ultimate intention of the client to redevelop the site into a low-density residential development. This is deemed as a change of land-use from "SP2 Infrastructure" to a residential land use scenario. The site current falls within a Infrastructure (SP2) in accordance with Bankstown *Local Environment Plan* (2015). Currently under the *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55), a consent authority must not consent to the carrying out of any development unless it has considered whether the land is contaminated. This report has been prepared to satisfy Clause 7 (2) and (3) of SEPP 55 and Canterbury Bankstown Council planning policies. Development plans for the proposed development are appended to this report as **Appendix A.**

1.3. Objectives

The objectives of this project were to:

- assess the potential for contamination to be present on the site in available/ accessible areas as a result of past and current land use activities;
- provide advice on whether the site would be suitable (in the context of land contamination) for the proposed land use setting; and
- provide recommendations for further investigation, management and/or remediation (if warranted).

1.4. Scope of Work

AG undertook the following scope of works to address the project objectives:

- A desktop review of the previous investigation reports and other relevant information relating to the site;

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- A site walkover to understand current site conditions and conduct underground utility locating;
- Conduct an intrusive site investigation using a track-mounted hydraulic drill rig, hand auger and/or track-mounted excavator to assess subsurface ground conditions and install groundwater monitoring wells;
- Collect representative soil and groundwater samples;
- Facilitate laboratory analysis of selected soil and groundwater samples for contaminates of potential concern (CoPC);
- Assess the results in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013* (NEPM 2013); and
- Prepare a SDSI in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites, 2011.*

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2. SITE IDENTIFICATION

The site is identified as Lot 103 DP874035 and is within the local government authority of Canterbury Bankstown. The local government authority zoning to this site is Infrastructure (SP2).

The approximate geographic coordinates of the middle of the site, inferred from Google Earth were 33°56'25" S and 150°59'27" E.

The locality of the site is set out in **Figure 1** with the general layout and boundary of the site is set out in **Figure 2**.

The site footprint covers an area of approximately 20 ha. Due to existing building footprints and inaccessible areas, this contamination assessment will be carried out within the accessible areas onsite comprising approximately 13ha.

A copy of a level survey is presented as **Appendix B.**

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3. SITE CONDITIONS AND SURROUNDING ENVIRONMENT

3.1. Geology

A review of the Sydney 1:250,000 Geological Series Sheet (3rd Edition) 1966, indicated that the site is likely to be underlain by a combination of:

- *'Triassic, Wiannamatta Group, Liverpool Sub-group (Rwl), defined as shale with some sandstone beds'*; and
- *Quaternary (Qa), characterised as alluvium, gravel, sand, silt and clay'*.

3.2. Acid Sulfate Soils

A review of the Department of Land and Water Conservation NSW Acid Sulfate Soil Risk Map for Liverpool (1997) indicated that the site lies in an area mapped as '*No Known Occurrence'* for which Acid sulfate soils are not known or expected to occur in these environments. Land management activities are not likely to be affected by acid sulfate soil materials. The typical landform types include bedrock slopes, elevated Pleistocene and Holocene dunes, and elevated alluvial plains.

3.3. Topography

The site topography was observed to be undulating and sloped downwards towards the south southwest. Google Earth indicated the site resides at an elevation ranging between approximately 5m to 23m AHD.

The detail and level survey presented as **Appendix B** provides further information on surface contours and elevations.

3.4. Hydrology

Surface water courses proximal to the site included the Georges River, located approximately:

- 1.3km to the northwest;
- 1.7km to the west; and
- 1.3km to the south southwest.

3.5. Hydrogeology

Based on distances to the nearest surface water course and the site topography, groundwater flow in the vicinity of the site is considered likely to be towards the south southwest. A comprehensive assessment of groundwater conditions and flow direction was carried out at the site (refer to **Section 7)**.

3.6. Surrounding Environment

Observations made during site works indicated the following land use activities adjacent to the site:

- North: Bullecourt Avenue with commercial / industrial land-use beyond including a service station to the north-west;

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- East: Mount Saint Joseph's High School and Horsley Road with commercial / industrial land-use beyond;
- South: The South Western Motorway (M5) with Kelso Landfill beyond; and
- West: Ashford Avenue with residential land-use beyond.

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4. PREVIOUS CONTAMINATION ASSESSMENTS

The following reports were considered during the undertaking of this project:

- Coffey, 25 August 2011 (Coffey 2011) '*Phase 2 Environmental Site Assessment – Student Residence Development University of Western Sydney, Bankstown Campus'*, Report ref: GEOTLCOV24163AG-AB;
- Noel Arnolds and Associates, October 2011(NAA 2011), '*Soil Contamination Investigation, University of Western Sydney – Bankstown Campus Bullecourt Avenue, Milperra NSW'*, Report Ref: SJ0085:95458.
- Environmental Investigation Services, 7 April 2016 (EIS 2016), '*Preliminary Contamination Screening and Waste Classification, Proposed Oval Facilities, UWS Bankstown Campus, 2 Bullecourt Avenue, Milperra'.*
- JBS&G Australia Pty Ltd, 7 February 2018 (JBS&G 2018) '*Phase 1 Environmental Assessment Report, Bullecourt Avenue, Milperra NSW',* Report ref: 54086-110124 (Rev 1);

A summary of these reports is presented in **Section 4.1 to 4.4**.

4.1. Coffey 2011

For the purposes of this Phase 2 Environmental Site Assessment (P2 ESA), Coffey assumed the site boundary comprised approximately 1.5ha. At the time of reporting, it was subsequently understood that the proposed student residence development was to extend further to the east and cover an area of approximately 3ha. Coffey understood that UWS required a P2 ESA to support a development application (DA) to Bankstown City Council.

The objectives of the assessment were to:

- Assess the acid sulfate soil status of the site based on a review of risk map and field
- observations;
- Assess the contamination status of the site by undertaking sampling and testing of soil; and
- Provide recommendations for further investigation/remediation requirements (if any) for the site
- to be suitable for the proposed student accommodation development.

The scope of work undertaken included:

- Fieldwork including soil sampling;
- Laboratory testing; and
- Data assessment and reporting.

Based on the site history information and visual observations, a number of Areas of Environmental Concern (AECs) and Chemicals of Potential Concern (COPCs) were identified. The identified AECs and associated CoPCs are presented in **Table 4.1**

Table 4.1 - AECs and associated CoPC

Potential Areas of Concern	Chemicals of Potential Concern	Chemicals of Potential Concern
Southern end of the site – building rubble burial	TPH, PAH, Metals, Asbestos	Building rubble was buried up to 3m to 4m below the site surface.

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Former farm dam – potential contaminated fill	TPH, BTEX, PAH, OCP, Metals, Asbestos	Potentially contaminated fill could have been used to backfill the dam.
Whole site – use of pesticides for pest/weed control	OCP, Metals	Chemical application (such as pesticides) was commonly used in historical farming activities. Contamination, if present, is likely to be localised near the surface and minor.
Whole site – hazardous building materials	Asbestos, Lead	Historical farm sheds/houses could contain asbestos and lead paint. Weathering, leaching and spreading (during demolition) of material would likely to be localised in the near surface.

A total of 25 borehole were cored across the site on 11 and 12 July 2011and submitted the samples to a NATA accredited laboratory for analysis of CoPC.

Analytical results indicated the contaminant concentrations were less than the adopted site criteria, with the exception of:

- Asbestos was detected at six locations across the site.

Coffey recommended additional assessment to be undertaken to further characterise the asbestos impact and to assist in the selection of remedial/management options.

4.2. NAA 2011

NAA 2011 was commissioned by JDH Architects to undertake a Soil Contamination Investigation (SCI) in an area in the northeast of the Bankstown Campus at the University of Western Sydney - Bankstown Campus located at Bullecourt Avenue, Milperra NSW (the site). The portion of the site investigated by NAA 2011 was approximately 2,500m^2 in area and resided to the north of the existing P2 car park at the Bankstown Campus. The proposed redevelopment comprised construction of a single storey childcare facility with adjacent car parking facilities.

The objectives of the SCI was to provide information on the extent and nature of contamination (if any) within the fill/soil material at the site and to assess the suitability of the site for the proposed land-use as a childcare facility.

NAA 2011 undertook the following scope of works to achieve the project objectives:

- Prepare a safe work method statement for works to be conducted at the site;
- Complete a site inspection and a comprehensive site walkover;
- Conduct grid-based sampling pattern by the hand auguring of eight locations within the boundaries of the site. Hand auguring was undertaken to a maximum depth of approximately 1.2m below ground surface with sampling conducted at varying depths through the fill/soil profile;
- Collect seventeen soil samples;
- Conduct NATA-certified laboratory-based analysis of soil; and
- Prepare a SCI report.

Based on the findings of this investigation, NAA 2011 concluded the following:

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- Hotspots of lead contamination have been identified at locations BH3 0.0-0.2m and S2 0.0-0.1m where identified during an intrusive investigation previously undertaken by Coffey (AG were not provided this report);
- Concentrations of cadmium (BH3 0.0-0.2m) and zinc (BH3 0.0-0.2m, S2 0.0-0.1m and S7 0.0-0.1m) have been found to exceed the adopted Provisional Phytotoxicity Investigation Levels (PPIL);
- The site was unsuitable for the proposed land use as a childcare facility due to the presence of hotspots of lead contamination which may present a risk to human health if not appropriately managed;
- Exceedances of PPILs have also been reported at these locations and can be addressed as part of the management of the lead hotspots; and
- A marginal exceedance of zinc concentrations when compared with the PPIL was recorded at S7 0.0-0.1m. Given the marginal nature of this exceedance, it does not impact upon the suitability of the site for the proposal land use as a childcare facility.

Based on these conclusions, NAA 2011 made the following recommendations:

- Given the shallow nature of the impacted material, it was assumed that this material will be excavated and removed from site during the course of site preparation works (e.g. stripping back of topsoil material) for the purposes of redevelopment;
- Fill/soils to be removed offsite for disposal should be classified in accordance with NSW EPA Waste Classification Guidelines (2014) and should be disposed of at an appropriately licenced landfill facility;
- Following site preparation works, a suitably qualified Environmental Consultant should return to site to collect validation samples of the area of concern (in vicinity of BH3, S2 and S7) in order to confirm acceptable residual concentrations of heavy metals are present with respect to the adopted HIL and PPIL and that the site is suitable for the intended land use; and
- If it is determined that site preparation works will not result in the excavation and removal of the shallow material at BH3 0.0-0.2m and S2 0.0-0.1m, remediation works will be required. In this event, it is recommended that a Remedial Action Plan (RAP) be developed to address remediation of the hotspots of contamination identified.

4.3. EIS 2016

Burtenshaw Scoufis Architecture + Interiors commissioned Environmental Investigation Services (EIS) to assign a waste classification to in-situ soil adjacent to the west of the athletics track located at 2 Bullecourt Avenue, Milperra NSW.

The aim of the investigation was to assess soil contamination issues at the site and to provide a waste classification for the material to be excavated for the proposed oval development.

The scope of work included the following:

- Review of available geological information;
- Soil sampling from three boreholes;
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC); and
- Preparation of a letter report presenting the results of the investigation.

All results were below the site assessment criteria (SAC) adopted for the site. Overlying fill soils were classified as General Solid Waste (Non-putrescible) and underlying natural soils were classified as

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Virgin Excavated Natural Material (VENM). Based on this data EIS concluded that the risk of widespread significant soil contamination in the development area was relatively low. The fill and natural soil material assessed was considered by EIS to be suitable for re-use on the subject site, provided it meets geotechnical and earthwork requirements.

4.4. JBS&G 2018

JBS&G Australia Pty Ltd (JBS&G) were engaged by Western Sydney University (WSU) (the client) to prepare a Phase 1 Environmental Assessment Report for the WSU Milperra Campus located off Bullecourt Avenue, Milperra NSW (the site). Based on current Master Plan concepts for the Milperra Campus, JBS&G understood WSU intends to create an integrated living and working precinct with a range of land uses including medium to high density residential, mixed use, retail, community, open space and conservation areas at the site.

The objective of the investigation was to assess the potential for contamination relating to historical and current land use activities at the site to constrain the intended development objectives, and to make recommendations for further investigations and or remediation to achieve intended land uses of the development.

To meet the project objectives, JBS&G carried out the following scope of works:

- Review of available council documentation, aerial photographs, legal title information, EPA records and heritage records to identify areas of environmental concern (AECs) and associated contaminants of potential concern (CoPC)
- Review of site setting including topography, hydrology, hydrogeology and geology;
- Review of records of environmental incidents or former environmental licenses held by the NSW EPA;
- A detailed site inspection of accessible areas to identify potential AECs and CoPC not identified in the historical record review;
- Development and documentation of a conceptual site model (CSM);
- Limited soil sampling and analysis of soil samples for a range of CoPC;
- Assessment of soil sampling and analysis results against EPA endorsed guideline criteria for residential land use; and
- Preparation of the Phase 1 Environmental Site Assessment report in general accordance with guidelines made or approved by the NSW EPA.

Surrounding land use at the time of JBS&Gs site walk over was comprised:

- North: Bullecourt Avenue with commercial / industrial land-use beyond including a service station to the north-west;
- East: Mount Saint Joseph's High School and Horsley Road with commercial / industrial land-use beyond;
- South: The South Western Motorway (M5) with Kelso Landfill beyond; and
- West: Ashford Avenue with residential land-use beyond.

A SafeWork NSW search of the Stored Chemical Information Database (SCID) and the microfiche records held by SafeWork was requested. Information provided by SafeWork NSW included details on a number of abandoned (2) underground storage tanks (USTs) formerly located in the central eastern section of the site. Review of the SafeWork NSW documentation indicated the 2 x 2,500L USTs were removed on Friday 19 December 1997 by Email Petroleum Systems.

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Based on site history review and observations during the site walkover, JBS&G identified the following AEC and associated CoPC presented in **Table 4.4**

Table 4.4- AECs and associated CoPCs

Areas of Environmental Concern (AECs)	Contaminants of Potential Concern (CoPCs)
Demolition of historical site structure that may have contained hazardous building materials	Heavy metals, lead and asbestos
Surface soils impacted with herbicides/pesticides due to the maintenance of site from noxious weeds/pests	OCPs
Fill materials across the site, potential imported to site	Heavy metals, TRH, BTEX, PAH, OCPs, PCBs and asbestos
Burial Area (fill material)	Heavy Metals, PAH, OCPs and asbestos
Groundwater along the northern and eastern boundaries adjacent commercial / industrial properties	Heavy metals, TRH, BTEX, PAH, VOCs
Landfill gas along the southern boundary adjacent the Kelso Landfill	Methane and other landfill gases (LFG)

Based on the unidentified sources of fill material potential imported to the site to backfill/raise topographic features and the potential for fill material at the site to contain waste materials associated with demolition of historical buildings potential containing asbestos and/or lead paint, fill materials must be considered a potential contaminated medium. Due to the age of some existing site structures, it is possible that they may contain hazardous building materials including asbestos and lead based paints. Soils immediately surrounding buildings are considered as potentially contaminated medium.

In addition, buildings containing asbestos and / or lead paint which may have been demolished without appropriate controls may have also impacted surface soils. Surface soils must also therefore be considered a potential contaminated medium.

Based on the suspected depth of groundwater >8 m bgs, the likelihood of contamination of groundwater as a result of activities at the site is considered to be low. Based on the presence of the landfill site to the south and the nearby commercial/industrial properties to the north and east, there is potential for groundwater to be impacted as a result of offsite activities.

Given the relatively close proximity of the landfill to the south of the site, landfill gas has the potential to be a contaminatr3ed medium in the southern portion of the site.

JBS&G carried out a limited detailed site inspection and investigation. During the detailed site inspection JBS&G noted the observation of topography for potential adjustments in ground levels due to filling, presence of waste material such as asbestos containing material (ACM) on the ground surface and on external surfaces of structures and potential chemical/fuel storage, use or spillage.

On 23 August 2017, ten surface samples were collected from the site using a hand auger and forward to a NATA accredited laboratory for analysis of heavy metals, PAH, asbestos (NEPM 500ml) and OCPs. During soil sampling, a geotechnical fabric layer was identified below the ground surface at

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sampling point SS10. Analytical results indicated the contaminant concentrations were less than the adopted site criteria, with the exception of:

- SS10 – asbestos fibres/fibrous asbestos (AF/FA) detected at 0.02% w/w above the adopted HSL site criteria 0.001% w/w.

Based on the findings of this investigation, JBS&G made the following conclusions:

- The site has historically been used for a combination of agricultural and residential uses prior to development of the university;
- There is the potential for impacts to soil as a result of the demolition of former building structures potentially containing hazardous building materials, including asbestos and lead paint. This was confirmed by the identification of asbestos at sampling point SS10 and review of the Coffey 2011 Phase 2 Environmental Site Assessment Report, which also identified and recommended management of asbestos in soil;
- There is the potential for presence of imported fill material of unknown origin to have been used during historical construction activities at the site; and
- Based on the presence of the landfill site to the south and the nearby commercial industrial properties to the north, northwest and east, there is considered to be a potential for contaminated groundwater and landfill gas migration to have impacted the site.

Based on these conclusions, JBS&G recommended a detailed site investigation (DSI) is undertaken for the site in order to assess the extent and degree of contamination at the site and to provide an assessment of risk posed by site contaminants to human and environmental health. In addition to the DSI, JBS&G recommended a hazardous building material survey be completed prior to commencement of redevelopment works such that materials identified as comprising lead paint and or asbestos may be appropriately managed with regard to exposure risks to site workers and future building occupants.

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5. CONCEPTUAL SITE MODEL

5.1. Sources of Contamination and Contaminants of Concern

A conceptual site model (CSM) is a representation of site-related information regarding contamination source, receptors and exposure pathways between identified sources and receptors. The CSM has been completed using the available data and completed on-site works. The methods used in the CSM are in general accordance with Section 4 of the NEPM (2013) Schedule B2 guideline. For a site to be designated as Contaminated Land, a plausible linkage between the identified Sources, Pathways and Receptors must be demonstrated. **Table 5.1** and associated **Figure 3,** outlines the identified areas of environmental concern (AECs), known and potential sources of contamination, corresponding contaminants of potential concern and the associated mechanism(s) of contamination identified for the site .

Table 5.1 Conceptual Site Model

Area of Environmental Concern (AEC)	Sources of Contamination	Contaminants of Potential Concern (CoPC)	Likely Mechanism(s) of Contamination
AEC01	Whole site – historical uncontrolled demolition, uncontrolled filling and regrading, historical farming practices.	Metals, TRH, BTEX, PAH, PCB, OCP/OPP, Phenols and Asbestos (0.001%).	Top down
AEC02	Building Rubble Burial Area (refer Coffey 2011 & JBS&G 2018)	Metals, TRH, BTEX, PAH, PCB, OCP/OPP, Phenols and Asbestos (0.001%).	Top down
AEC03	Uncontrolled large-scale filling/ bulk soil storage.	Metals, TRH, BTEX, PAH, PCB, OCP/OPP, Phenols and Asbestos (0.001%).	Top down
AEC04	Underground storage or petroleum-based product onsite (refer JBS&G 2018).	Metals, PAH, BTEX, TRH.	Sub-surface release

5.2. Potentially Affected Media

Recognizing the potentially affected media is key to identifying the potential pathways between contaminant sources and receptors. Where the pathway between a source and a receptor is incomplete, the exposure to chemical substances via that pathway cannot occur. **Table 5.2** outlines the known and potential sources of contamination and associated potentially affected media identified for the site.

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Table 5.2 – Potentially affected media

Area of Environmental Concern (AEC)	Sources of Contamination	Contaminants of Potential Concern (CoPC)
AEC01	Whole site – historical uncontrolled demolition, uncontrolled filling and regrading, historical farming practices.	Soil
AEC02	Building Rubble Burial Area (refer Coffey 2011 & JBS&G 2018)	Soil
AEC03	Uncontrolled large-scale filling/ bulk soil storage.	Soil
AEC04	Underground storage or petroleum-based product onsite (refer JBS&G 2018).	Soil and Groundwater

5.3. Human and Ecological Receptors

The site is proposed for redevelopment, comprising a low density residential development. Based on the proposed land use scenario, previously completed contamination reports and guidance provided in Section 2.2 of NEPM (2013), AG considers it reasonable to adopt the 'HIL A – Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools.

Based on the existing and proposed land-use setting, the need for further ecological assessment is considered warranted using ecological investigation levels (EILs) and ecological screening levels (ESLs) outlined in NEPM (2013).

5.4. Potential and Complete Exposure Pathways

Potential and complete exposure pathways refer to the way in which potential contamination makes contact with the receptor. There are three primary exposure pathways:

- Direct contact;
- Inhalation/vapor intrusion; and
- Ingestion.

These key exposure pathways have been considered in **Sections 5.4.1** to **Section 5.4.4** in accordance with Section 4 of the NEPM (2013) Schedule B2 guideline.

5.4.1. Direct Contact – Human Health

AG notes that the proposed development includes building footprints and hardstand pavement areas across large portions of the site, which would act as a direct contact barrier between potential land contamination and onsite receptors during operation of the site.

However, within soft scaped/bush areas and during construction, future residents, the public and construction employees may complete the direct contact exposure pathway between potential contamination and receptors.

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5.4.2. Inhalation / Vapour Intrusion – Human Health

In order for a potentially unacceptable inhalation / vapour intrusion human health exposure risk to exist, a primary vapour source (e.g. underground storage tank) or secondary vapour source (e.g. significantly contaminated soil or groundwater) is required.

The review of historical evidence and previously completed contamination assessments indicated a moderate likelihood for a potential primary source to be present in soil and groundwater onsite (historical USTs (JBS&G 2018) – AEC04) and secondary vapour source migrating onto site in groundwater from surrounding land-use activities (commercial/industrial properties including service station (north & east) and landfill gas (south) (JBS&G 2018)).

Site walkover observations and previously completed contamination assessments indicated a potential land use activity to be uncontrolled demolition and filling. The excavation, transport, placement and spreading of imported (uncontrolled) fill material involves significant disturbance of soils which typically results in volatilisation of vapour producing contaminants. On that basis, the potential for vapours to be present in fill soils on site at concentrations which might present an unacceptable exposure risk, is considered to be low to negligible.

AG will consider data obtained during fieldwork in the context of inhalation / vapour intrusion risk.

5.4.3. Aesthetics – Human Health

Section 3.6.3 of NEPC (1999a) advises that there are no specific numeric aesthetic guidelines, however site assessment requires a balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity.

As a conservative measure, AG will consider data obtained during fieldwork in the context of aesthetics risk.

5.4.4. Terrestrial Ecosystems – Ecological Health

Section 3.4.2 of NEPM (ASC) 2013 advises that the protection of the environment (terrestrial and aquatic) should be a consideration for all site assessments.

Based on the field observations, review of previous completed contamination assessment reports, advice in NEPM ASC (2013) and the nature and extent of the proposed development concept, the need for further ecological assessment is considered warranted.

5.4.5. Management Limits for Petroleum Hydrocarbon Compounds

NEPM (2013) notes that there are a number of policy considerations which reflect the nature and properties of petroleum hydrocarbons:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosive hazards; and
- Effects on buried infrastructure (e.g. penetration of or damage to, in-ground services by hydrocarbons).

NEPM (2013) includes ‘management limits’ to avoid or minimise these potential effects. Application of the management limits requires consideration of site-specific factors such as the depth of building basements and services and depth to groundwater, to determine the maximum depth to which the limits should apply. NEPM (2013) also notes that management limits may have less relevance at

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operating industrial sites which have no or limited sensitive receptors in the area of potential impact, and when management limits are exceeded, further site-specific assessment and management may enable any identified risk to be addressed.

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6. DETAILED SITE INVESTIGATION METHODOLOGY

Soil and groundwater sampling and analysis were undertaken with reference to the following documents:

- NSW EPA 1995. *Contaminated Sites Sampling Design Guidelines,* NSW Environment Protection Authority, Sydney South;
- NEPC. 1999. *'National Environment Protection (Assessment of Site Contamination) Measure. Schedule B (2) Guideline on Data Collection, Sample Design and Reporting.'* National Environmental Protection Council, Adelaide;
- Standards Australia. 2005*.' AS 4482.1. Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1: Non-volatile and Semi-volatile Compounds.'* www.standards.com.au*;*
- Standards Australia. 1999. *'AS 4482.2. Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 2: Volatile Compounds'.* www.standards.com.au*;*
- Standards Australia. 1998. *'AS/NZS 5667.11:1998. Water Quality – Sampling. Part 11: Guidance on Sampling of Groundwater.'* www.standards.com.au*;*
- Standards Australia. 1998. *'AS/NZS 5667.1:1998. Water Quality – Sampling. Part 1: Guidance on the Design of Sampling Programs, Sampling Techniques and the Preservation and Handling of Samples'.* www.standards.com.au*; and*
- ACS NEPM. 2013 *National Environment Protection (Assessment of Site Contamination) Measure 1999 Schedule B (1) Investigation Levels for Soil and Groundwater.*

6.1. Scope of Fieldworks

Due to site constraints, the Stage 2 Detailed Site Investigation will only account for approximately 65% of the site in terms of intrusive sampling. Consequentially, the nature, extent and degree of potential contamination will not be adequately assessed on the entirety on the site. Therefore, the fieldwork component of this detailed site investigation has been designed to target soil and groundwater locations in accessible areas that will cause minimal disturbance to the operating university.

All site investigation works will be supervised by an experienced AG Environmental Scientist.

The scope of the investigation was developed based upon the findings of previous contamination assessment, site walkovers and survey findings. Based upon this approach, the following scope of works will be carried out:

- Completion of a site-specific Safe Work Method Statement in accordance with AG Work Health and Safety policies;
- Completion of one hundred and two (102) borehole/ test pit/ hand augur locations;
- Collection of soil samples from each of the 102 borehole/ test pit/ hand augur locations;
- Construction and development of eight (8) groundwater monitoring wells;
- Collection of groundwater samples from the eight (8) groundwater monitoring wells;
- Collection and analysis of quality assurance/quality control (QA/QC) samples in accordance with NEPM requirements; and
- Analysis of a selection of primary soil and groundwater samples and 10% quality control samples.

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6.2. Fieldworks Methodology

6.2.1. Soil Sampling Methodology

Discrete soil samples will be recovered from 102 boreholes/ test pits/ hand augur locations. Each soil sample will be collected using a new clean pair of nitrile gloves and placed in the appropriate sample containers provided by the laboratory.

The soil bores will be drilled to a maximum depth of 4.0m bgl or refusal. Samples for potential analysis will be collected from the near surface, at ~0.5 m interval within the soil profile or with change of strata.

The soil jars were labelled with sample identification (sample location and depth), date and name of sampler.

Upon completion of the soil boring, where applicable, the boreholes will be backfilled and the surface will be concreted using asphalt.

Soil bore logs will be maintained in the field by an experienced AG environmental scientist for all exploratory holes. Field observations such as lithology, odours, staining, depth of water etc. will be noted on the logs. The logs are presented within **Appendix C.**

6.2.2. Groundwater Monitoring Well Installation

Eight (8) groundwater monitoring wells will be installed within predetermined accessible areas surrounding the site.

The groundwater monitoring wells will be installed using slotted 50 mm Class 18 PVC fitted with an end cap. The screen will be packed with acid washed 1–3 mm gravel. Bores will be extended to at least 2m below the static water level, with the screen located approximately 0.5m above static water level to the base of the bore. A bentonite seal will be placed above the screen with the remainder of the annulus above the seal backfilled with clean washed sand and concrete. The bores will be finished with a flush lockable gatic cover.

Groundwater monitoring well logs are included in borehole logs **Appendix C.**

The above methodologies reflect the requirements of the NSW EPA and Australian Standards.

6.2.3. Groundwater Sampling and Monitoring Methodology

Following the groundwater monitoring well installation activity, all site groundwater monitoring wells (MW01 to MW08) will be then purged, tested and sampled in accordance with Australian Standards, NSW EPA and NEPM 2013 Guidelines.

Prior to groundwater sampling, the groundwater level in each monitoring well will be measured using an oil / water interface meter. This will adequately assess the depth to groundwater and whether light non-aqueous phase liquids (LNAPL) are present in the water column.

A YSI multiparameter meter will be used to measure pH, electrical conductivity (EC), redox potential, dissolved oxygen (DO) and temperature (groundwater indicators). Purging will be undertaken until the field parameters were stable (generally within 10% or 0.1 for pH) for three consecutive readings taken 5 minutes apart.

The groundwater stabilisation data will be recorded on groundwater sampling logs provided in **Section 8.8** with the calibration certificate presented in **Appendix F**.

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6.3. Laboratory Analysis

A selection of soil and all groundwater samples will be forwarded to a NATA accredited laboratory for analysis of a range of the analytes listed below. Eurofins | Mgt will be used for analysis of primary samples. ALS Environmental will be used for the analysis of interlaboratory samples.

A selection of primary soil samples will be submitted for analysis for a range of the following analytes:

- TRH;
- BTEX;
- PAHs;
- OCPs / OPPs;
- PCBs;
- Phenols;
- Metals (As, Cd, Cr, Cr (VI), Cu, Ni, Pb, Zn);
- Asbestos ID; and
- Asbestos 0.001%;

Primary groundwater samples will be analysed for a selection of the following analytes:

- TRH;
- BTEX;
- PAH;
- Phenols;
- Trace metals (As, Cd, Cr, Cr (VI), Cu, Ni, Pb, Zn);
- Nitrogen & phosphorus species; and
- Anions and cations.

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7. DATA QUALITY OBJECTIVES

Appendix B of NEPC (2013b) provides guidance on the development of data quality objectives (DQO) using a seven-step process.

7.1. Step 1: State the problem

The first step involves summarising the contamination problem that will require new data and identifying the resources available to resolve the problem.

The key objectives of this project are to:

- assess the potential for contamination to be present on the site in available/accessible areas as a result of past and current land use activities;
- provide advice on whether the site would be suitable (in the context of land contamination) for the proposed land use setting; and
- provide recommendations for further investigation, management and/or remediation (if warranted).

This project is being undertaken because:

- the site is the subject of redevelopment works; and
- Areas of environmental concern identified onsite, have the potential to present an unacceptable human health exposure risk in the context of the proposed land use setting.

The project team identified for this project includes Alliance Geotechnical Pty Ltd, the developer and the planning consent authority.

The regulatory authorities identified for this investigation include NSW EPA and Canterbury Bankstown Council.

7.2. Step 2: Identify the decision/goal of the study

The second step involves identifying decisions that need to be made about the contamination problem and the new environmental data required to make them.

The decisions that need to be made during this investigation include:

- Is the environmental data collected for the project, suitable for assessing relevant land contamination exposure risks?
- Do the concentrations of contaminants of potential concern (COPC) present an unacceptable exposure risk to identified receptors, for the proposed land use setting?
- Is the site suitable or can the site be deemed suitable for the proposed land use setting, in the context of land contamination?

7.3. Step 3: Identify the information inputs

The third step involves identifying the information needed to support decisions and whether new environmental data will be needed.

The inputs required to make the decisions for this investigation, will include:

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- data obtained during searches of the site's history;
- review of previously completed contamination assessment reports
- the nature and extent of sampling at the site, including both density and distribution;
- samples of relevant site media;
- the NATA accredited analysis of physical and/or chemical parameters of the relevant site media samples; and
- assessment criteria adopted for each of the media sampled.

Taking into consideration the objectives of this project, and the conceptual site model and land use setting presented in **Section 5** of this project, the assessment criteria relevant to the proposed land use setting adopted for this investigation include:

- Human health direct contact – HILs in Table 1A (1) in NEPC (2013a) and HSLs in Table B4 of Friebel, E & Nadebaum, P (2011);
- Human health inhalation/vapour intrusion – HSLs in Table 1 (A) in NEPC (2013a);
- Petroleum hydrocarbon compounds (management limits) – Table 1 B(7) of NEPC (2013a);
- Ecological Assessment - Site specific ecological investigation levels (EILs) will be generated based on pH and cation exchange capacity data obtained from the site soils. Ecological screening levels (ESLs) will be derived from Table 1B(1), (2) (3), (4), (5) and (6) in NEPM (ASC) 2013; and
- Aesthetics – no highly malodorous site media (e.g. strong residual petroleum hydrocarbon odours, hydrogen sulphide in site media, organosulfur compounds), no hydrocarbon sheen on surface water, no discoloured chemical deposits or soil staining with chemical waste other than of a very minor nature, no large monolithic deposits of otherwise low risk material (e.g. gypsum as powder or plasterboard, cement kiln dust), no presence of putrescible refuse including material that may generate hazardous levels of methane such as a deep-fill profile of green waste or large quantities of timber waste, and no soils containing residue from animal burial (e.g. former abattoir sites).

7.4. Step 4: Define the boundaries of the study

The fourth step involves specifying the spatial and temporal aspects of the environmental media that the data must represent to support decisions.

The spatial extent of the project will be limited to the site as defined by its boundaries.

The temporal boundaries of the project include:

- the project timeframes presented in AG's proposal for this project, and subsequent remediation contractor works program (if required);
- unacceptable weather conditions at the time of undertaking fieldwork, including rainfall, cold and/or heat;
- access availability of the site; and
- availability of AG field staff (typically normal daylight working hours, Monday to Friday).

The lateral extent that contamination will be based on the conceptual site model and determined by NATA accredited laboratory analytical results.

The vertical extent that contamination will be based on the conceptual site model and determined by NATA accredited laboratory analytical results.

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The scale of the decisions required will be based on the entire site.

Constraints which may affect the carrying out of this investigation may include access limitations, presence of above and below ground infrastructure, and hazards creating health and safety risks.

7.5. Step 5: Develop the analytical approach (or decision rule)

The fifth step involves defining the parameter of interest, specifying the action level, and integrating information from Steps 1 to 4 into a single statement that gives a logical basis for choosing between alternative actions.

7.5.1. Rinsate Blanks

One rinsate blank will be collected and scheduled for analysis, for each day of sampling undertaken, if non-disposable sampling equipment was used on that day. The rinsate blank will be analysed for at least one of the analytes the sample/s collected that day are being scheduled for analysis for (with the exception of asbestos).

7.5.2. Trip Spikes and Trip Blank Samples

One trip spike and trip blank sample will be used and scheduled for analysis, for each day of sampling undertaken, if site samples being collected that day are being analysed for volatile contaminants of concern (typically BTEX and/or TRH C_6-C_{10}).

7.5.3. Field Duplicates and Field Triplicates

Field duplicate and Field triplicates will be collected at a rate of one per twenty (5%) site samples collected. The duplicates and triplicates collected will be analysed for at least one of the analytes that the parent sample of the duplicate/triplicate is being scheduled for analysis for (with the exception of asbestos).

The relevant percent difference (RPD) of concentrations of relevant analytes, between the parent sample and the duplicate/triplicate will be calculated.

7.5.4. Laboratory Analysis Quality Assurance / Quality Control

The analytical laboratory QA/QC program will typically include laboratory method blank samples, matrix spike samples, surrogate spike samples, laboratory control samples, and laboratory duplicate samples.

7.5.5. If/Then Decision Rules

AG has adopted the following ‘if/then’ decision rules for this investigation:

- If the result of the assessment of field data and laboratory analytical data is considered acceptable, then that field data and laboratory analytical data is suitable for interpretation within the scope of this investigation; and
- If the field data and laboratory analytical data is within the constraints of the assessment criteria adopted for this investigation (refer Section 7.3), then the contamination exposure risks to identified receptors, are considered acceptable.

In the event the assessment of field data and/or laboratory analytical data results in the data being not suitable for interpretation, then AG will determine if additional data is required to allow interpretation to be undertaken.

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In the event that field data and/or laboratory analytical data exceeds the assessment criteria adopted for this investigation, AG will undertake an assessment of the exceedance in the context of the project objectives to determine if additional data is required and whether management and/or remediation is required.

7.6. Step 6: Specify the performance or acceptance criteria

The sixth step involves specifying the decision maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data. When assessing contaminated land, there are generally two types of errors in decision making:

- Contamination exposure risks for a specific land use setting are acceptable, when they are not; and
- Contamination exposure risks for a specific land use setting are not acceptable, when they are.

AG will mitigate the risk of decision error by:

- Calculation of the 95% upper confidence limit (UCL) statistic to assess the mean concentration of relevant contaminants of potential concern;
- Assignment of fieldwork tasks to suitably experienced AG consulting staff, and suitably experienced contractors;
- Assignment of laboratory analytical tasks to reputable NATA accredited laboratories;
- Assignment of data interpretation tasks to suitably experienced AG consulting staff, and outsourcing to technical experts where required.

AG will also adopt a range of data quality indicators (DQI) to facilitate assessment of the completeness, comparability, representativeness, precision and accuracy (bias).

Table 7.6 - Data Quality Indicators

COMPLETENESS			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Critical locations sampled	Refer **Section 6.1.6**	Critical samples analysed according to DQO	Refer **Section 6.1.6**
Critical samples collected	Refer **Section 6.1.6**	Analytes analysed according to DQO	Refer **Section 6.1.6**
SOPs appropriate and complied with	100%	Appropriate laboratory analytical methods and LORs	Refer **Section 6.1.6**
Field documentation complete	All sampling point logs, calibration logs and chain of custody forms	Sample documentation complete	All sample receipt advices, all certificates of analysis
		Sample extraction and holding times complied with	Refer **Section 6.1.11**

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COMPARABILITY			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Same SOPs used on each occasion	100%	Same analytical methods used by primary laboratory	Refer **Section 6.1.6**
Climatic conditions	Samples stored in insulated containers with ice, immediately after collection	Same LORs at primary laboratory	Refer **Section 6.1.6**
Same types of samples collected, and handled/preserved in same manner	All soil samples same size, all stored in insulated containers with ice	Same laboratory for primary sample analysis	All primary samples to Eurofins MGT
		Same analytical measurement units	Refer **Section 6.1.11**
REPRESENTATIVENESS			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Appropriate media sampled according to SAQP	Refer **Section 6.1.6**	Samples analysed according to SAQP	Refer **Section 6.1.6**
Media identified in SAQP sampled	Refer **Section 6.1.6**		
PRECISION			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Field duplicate / triplicate RPD	Minimum 5% duplicates and triplicates No limit for analytical results <10 times LOR 50% for analytical results 10-20 times LOR 30% for analytical results >20 times LOR	Laboratory duplicates	No exceedances of laboratory acceptance criteria
SOPs appropriate and complied with	100%		
ACCURACY (BIAS)			

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Field Considerations	Assessment Criterion	Laboratory Considerations	Assessment Criterion
Rinsate blanks	Less than laboratory limit of reporting	Laboratory method blank	No exceedances of laboratory acceptance criteria
Field trip spikes	Recoveries between 60% and 140%	Matrix spike recovery	No exceedances of laboratory acceptance criteria
Field trip blanks	Analyte concentration <LOR	Surrogate spike recovery	No exceedances of laboratory acceptance criteria
		Laboratory control sample recovery	No exceedances of laboratory acceptance criteria

7.7. Step 7: Develop the plan for obtaining data

The seventh step involves identifying the most resource effective sampling and analysis design for generating the data that is required to satisfy the DQOs.

7.7.1. Sampling Point Layout Plan

Table A in NSW EPA *Sampling Design Guidelines* (1995) provides guidance on minimum sampling point densities required for site characterisation, based on detecting circular hot spots by using a systematic sampling pattern. This guidance assumes the investigator has little knowledge about the probable locations of the contamination, the distribution of the contamination is expected to be random (e.g. land fill sites) or the distribution of the contamination is expected to be fairly homogenous (e.g. agricultural lands).

However, Section 3.1 of NSW EPA (1995) states that a judgemental sampling pattern can be used where there is enough information on the probable locations of contamination. Further to this, Section 6.2.1 of NEPC (2013b) states that the number and location of sampling points is based on knowledge of the site and professional judgement. Sampling should be localised to known or potentially contaminated areas identified from knowledge of the site either from site history or previously completed site contamination assessments. Judgemental sampling can be used to investigation sub-surface contamination issues in site assessments.

As this investigation follows previously completed contamination assessments that provided a limited understanding of site contamination within localised areas onsite, it is considered reasonable to carry out a combination of both suggested sampling patterns and conduct both systematic and targeting sampling points.

The proposed sampling point layout arrangement for this project is presented in **Table 7.7.1**. The locations of the proposed sampling points are set out in **Figure 4**.

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Table 7.7.1 Sampling Point Layout Arrangement

Area of Environmental Concern	Sampling Point ID	Method	Target Depth of Sampling Point (m bgs)
AEC01	BH01 to BH08, BH10, BH11, BH14, BH15, BH19, BH20, BH23 to BH52, BH54, BH57 to BH84 and BH86 to BH100	Mechanical push tube and solid flight auger.	Targeting natural material and inferred groundwater table (BH01 to BH08).
AEC02	BH18 to BH21	Mechanical push tube and solid flight auger	Targeting natural material
AEC03	TP09, TP12, TP13, TP16, TP17, TP22, TP53, TP55, TP56, TP85 and TP101	Excavator	Targeting natural material
AEC04	Inaccessible	N/A	N/A

If visual or olfactory observations indicated a potential for soil contamination to be present, then collection of additional samples will be considered.

The location of each sampling point will be marked on a site plan with GPS co-ordinates recorded on borehole logs.

7.7.2. Identification, Storage and Handling of Samples

Sample identifiers will be used for each sample collected, based on the sampling point number and the depth/interval the sample was collected from, e.g. a sample collected from borehole BH08 at a depth of 0.2m to 0.4m below ground level, would be identified as BH08/0.2-0.4.

Project samples will be stored in laboratory prepared glass jars and placed in insulated container/s with ice.

Samples will be transported to the relevant NATA accredited analytical laboratory, with chain of custody (COC) documentation that includes the following information:

- AG project identification number;
- Each sample identifier;
- Date each sample was collected;
- Sample type (e.g. soil or water);
- Container type/s for each sample collected;
- Preservation method used for each sample (e.g. ice);
- Analytical requirements for each sample and turnaround times; and
- Date and time of dispatch and receipt of samples (including signatures).

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7.7.3. Decontamination

In the event that non-disposable sampling equipment is used, that equipment will be decontaminated before and in between sampling events, to mitigate potential for cross contamination between samples collected. The decontamination methodology to be adopted for this project will include:

- Washing relevant sampling equipment using potable water with a phosphate free detergent (i.e. Decon 90 or similar) mixed into the water;
- Rinsing the washed non-disposable sampling equipment with distilled or de-ionised water; and
- Air drying as required.

7.7.4. Laboratory Selection

The analytical laboratories used for this project will be NATA accredited for the analysis undertaken.

7.7.5. Laboratory Analytical Schedule

Project samples will be scheduled for NATA accredited laboratory analysis, using a combination of:

- Observations made in the field of the media sampled;
- Headspace screening results (where applicable); and
- The contaminants of potential concern (COPC) identified for the area of environmental concern that the sample was collected from.

Based on site history and previously completed contamination assessments, AG has adopted the laboratory analytical schedule presented in **Table 7.7.5.1 and Table 7.7.5.2 for** this project.

Table 7.7.5.1 Laboratory Analytical Schedule – Soil

Sampling Point ID	Analytical Schedule
BH01 to BH08, BH10, BH11, BH14, BH15, BH18 to BH21, BH23 to BH52, BH54, BH57 to BH84 and BH86 to BH100 TP09, TP12, TP13, TP16, TP17, TP22, TP53, TP55, TP56, TP85 and TP101	Metals, TRH, BTEX, PAH, PCB, OCP/OPP, Phenols and Asbestos (0.001%).

Table 7.7.5.2 Laboratory Analytical Schedule – Groundwater

Sampling Point ID	Analytical Schedule
MW01 to MW08	Inorganic Compounds, BTEX, PAH, Metals, VOCs, OCP/OPP, PCB, TRH.

7.7.6. Laboratory Holding Times, Analytical Methods and Limits of Reporting

The laboratory holding times, analytical methods and limits of reporting (LOR) being used for this project, are presented in **Table 7.7.6**

Table 7.7.6 Laboratory Holding Times, Analytical Methods and Limits of Reporting

Analyte	Holding Time	Analytical Method	Limit of Reporting (mg/kg)
BTEX and TRH C_6-C_{10}	14 days	USEPA 5030, 8260B and 8020	0.2-0.5
TRH >C_{10}-C_{40}	14 days	USEPA 8015B & C	20-100
VOC	14 days	USEPA 8260	0.1-0.5
PAH	14 days	USEPA 8270	0.1-0.5
OCP	14 days	USEPA 8081	0.2
PCB	14 days	USEPA 8270	0.2
Metals	14 days	USEPA 8015B & C	0.05 – 2
Asbestos	No limit	Inhouse Method	0.001% w/w

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8. FIELDWORK

8.1. Soil Sampling

Soil sampling was undertaken by AG on 16, 17, 18 & 19 December 2019 and 8, 9 &15 January 2020. An underground utility locating contractor was engaged to survey each sampling point for the presence of underground services.

A total of 102 sampling points were established onsite using a combination of track-mounted drill rig fitted with push tube and solid flight augers, 5 tonne excavator, mechanically operated push tube and hand auger equipment.

The locations of the sampling points established onsite are presented in **Figure 4.**

Image 8.1.1 View of excavation works at sampling point TP56

Image 8.1.2 View of drilling works at sampling point BH08

Samples were collected at each sampling point and placed in laboratory supplied acid-rinsed glass jars (with Teflon lined lids) and 500 mg zip-lock bags. The jars and bags were labelled with the project number, sample identifier and date the samples were collected on.

At the completion of soil sampling, boreholes (BH01 to BH08) were preserved for groundwater well installation while all other sampling point locations were backfilled.

Each sampling point established was marked on a site plan. The locations of these sampling points are presented in **Figure 4**.

8.2. Site Geology

Observations were made of soils encountered during sampling work. These observations were recorded on borehole logs. A copy of these logs is presented as **Appendix C**. Anthropogenic materials such as concrete and asphalt gravels, glass, PVC piping and brick were observed within the fill profile onsite.

8.3. Headspace Screening

Samples collected were subjected to headspace screening. A sub sample from each sampling point was placed in a zip lock bag, sealed and shaken. Each bag was then pierced with the probe tip of a calibrated photoionisation detector (PID) and the screening results recorded. These results are recorded on the borehole logs presented in **Appendix C**.

The results of the headspace screening indicated the potential for ionisable volatile organic compounds (VOC) to be present in the samples, was low.

A copy of the calibration record for the PID is presented in **Appendix D.**

8.4. Odours

Olfactory evidence of odours in the soil samples collected, was not detected.

8.5. Staining

Visual evidence of staining in the soil samples collected, was not detected.

8.6. Potential Asbestos Containing Materials

Visual evidence of potential asbestos containing materials (ACM) in the soil samples collected, was detected at sampling points:

- TP09;
- TP53;
- TP56;
- BH59; and
- TP101;

8.7. Groundwater Monitoring Well Installation

A total of eight (8) groundwater monitoring wells were installed on 16, 17 and 18 December 2019 by Epoca Environmental Drilling, under the supervision of AG, at sampling points BH01/MW01 to BH08/MW08. Each well location was drilled using a track mounted drilling rig fitted with push tube and solid stem rotary augers.

Drilling depths were extended to a nominal depth ranging between 5m to 10m bgl. A monitoring well was then constructed using 50mm uPVC Class 18 screen and casing, PVC end cap, gravel pack, hydrated bentonite seal, lockable torque cap and a cast iron gatic lid.

Monitoring well construction details (MW01 to MW08) are included in the borehole logs presented in **Appendix C**.

On 18 December 2019, each monitoring well was developed using a battery-operated submersible pump or bailer, with groundwater removed from each well until dry.

Surveying points were established by Affinity Survey from the top of each monitoring well casing, to provide a comprehensive understanding of groundwater movement onsite (refer to **Appendix E)**. Following the survey evaluation, AG assessed each monitoring well using an interface probe to measure the depth to standing water level (SWL) from the top of casing (TOC). The depth to groundwater measured during the well gauging task, is presented in **Table 7.7.1** with inferred groundwater flow direction depicted in **Figure 5.**

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Table 8.7.1. Monitoring Well Gauging Results

Sampling Point	Top of Casing (TOC) Level (m AHD)	Gauged Depth to Groundwater (m) from (TOC)	Standing Water Level (m AHD)
MW01	7.374	0.875	6.499
MW02	5.475	3.800	1.675
MW03	7.494	5.960	1.534
MW04	16.672	4.503	12.169
MW05	21.697	5.385	16.312
MW06	18.711	Well Dry	Not Applicable
MW07	20.557	Well Dry	Not Applicable
MW08	16.641	4.335	12.306

Based on the survey results and gauged depth to groundwater, it is considered reasonable to assume groundwater onsite is flowing from the northeast corner to the west and south.

The locations of the monitoring well sampling points (MW01 to MW08) established on site, are presented in **Figure 4.**

8.8. Groundwater Monitoring Event

A groundwater monitoring event (GME) was undertaken at all monitoring wells located onsite (MW01 to MW08) on 8 January 2020 by AG.

A bailer was used at each groundwater monitoring well to initially conduct a visual and olfactory investigation for the potential presence of LNAPL onsite. No visual or olfactory evidence of LNAPL was detected at each groundwater monitoring well (MW01 to MW08).

Subsequently, monitoring wells were purged using a low-flow peristaltic pump and field water quality parameters were measured using a calibrated water quality meter and flow cell (where possible). Measured field water quality parameters at the completion of purging each well, are presented in **Table 8.8.1**.

Table 8.8.1 Field Water Quality Parameters

Sampling Point	Dissolved Oxygen (ppm)	Electrical Conductivity (µs/cm)	pH	Redox (mV)	Temperature (^{o}C)
MW01	0.75	25151	6.32	60.5	22.6

Sampling Point	Dissolved Oxygen (ppm)	Electrical Conductivity (µs/cm)	pH	Redox (mV)	Temperature (°C)
MW02	1.86	8962	5.50	72.2	21.1
MW03	3.12	17277	5.28	134.8	22.5
MW04	3.44	17566	6.59	132.4	23.3
MW05	1.22	26261	6.16	157.7	24.9
MW06	Groundwater Well Dry				
MW07	Groundwater Well Dry				
MW08	0.67	24360	5.69	94.6	21.4

Once the field water quality parameters had equalised at the completion of purging each monitoring well, laboratory supplied groundwater sampling containers were filled with the extracted groundwater from each groundwater monitoring well (MW01 to MW08). The containers were labelled with the project number, sample identifier and date the samples were collected on and forwarded to a NATA accredited laboratory for analysis of CoPC.

A copy of the calibration record for the water quality meter is presented in **Appendix F**.

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9. LABORATORY ANALYSIS

The samples collected were transported to the analytical laboratory, using chain of custody (COC) protocols. A selection of these samples was scheduled for analysis, with reference to the relevant COPC identified for the AEC that the samples were collected from.

A copy of the analytical laboratory certificates of analysis, is presented in **Appendix G**.

The sample analytical results were tabulated and presented in the attached **Table LAR1** and **Table LAR2** with relative percent difference calculations presented in **Table LAR3**.

Laboratories engaged for analytical testing purposes were all NATA accredited.

Laboratory procedures to ensure samples are representative include the reporting of holding times, sample conditions upon receipt and the analysis of several QC samples. QC samples generally reported include duplicates, blanks, matrix spikes, and laboratory control samples (LCS).

These QC samples are reported within the laboratory reports in **Appendix G**, and any outliers are discussed below.

9.1. Holding Times

All sample analysis was conducted within the acceptable holding times.

9.2. Sample Condition

Sample condition upon arrival at the laboratory is documented on the sample receipt provided by the laboratory and provided in **Appendix G**.

All samples were reported to arrive at the laboratory in appropriate containers, packaged in a chilled cool box.

9.3. Blanks

Blanks are analysed to determine if laboratory processes are impacting results. Solvents are processed in the same manner as the primary samples.

Blanks are analysed at a rate of one per ≤20 samples and should be reported at below the PQL.

No detects were reported in the laboratory blanks.

9.4. Laboratory Control Samples

Laboratory Control Samples (LCS) are a standard reference material to which representative analytes are added. LCS are used to check the accuracy of laboratory testing procedures. LCS are analysed at a rate of one per ≤20 samples. Reported percentages are expected to be generally ±20% with higher percentages being acceptable for some organics and inorganics in soils.

All LCS samples reported as acceptable.

9.5. Duplicates

Duplicates refer to the process of running the same sample twice. Duplicates check the precision of the laboratory testing techniques. Duplicates are analysed at a rate of one per ≤10 samples.

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Duplicates values are judged based on RPD calculations using the following formula:

RPD = (a-b)/ ((a+b)/2)*100

*a is the primary value

*b is the duplicate or interlaboratory value

RPD values are generally expected to be below 50 however values determined using results below five times the PQL may be higher while RPD calculated from values greater than ten times the PQL should be lower.

No laboratory RPD values are reported as exceeding the laboratory levels.

9.6. Matrix Spikes

Matrix spikes have a known concentration of a target analyte added to the sample to determine if the physical properties of the sample are interfering with the reported results.

Matrix spikes are not carried out for all analytes and are expected to fall within the range 60-140%.

No matrix spikes were reported outside of acceptable levels

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10. DATA QUALITY INDICATOR ASSESSMENT

10.1. Completeness

An assessment of the completeness of data collected was undertaken, and the results presented in **Table 10.1**.

Table 10.1 Completeness DQI

Field Considerations	**Target**	**Actual**	**Comment**
Critical locations sampled	102 soil and 8 groundwater	102 soil and 8 groundwater	Performance against indicator considered acceptable.
Critical samples collected	Refer **Section 7**	Refer **Section 7**	Performance against indicator considered acceptable.
SOPs appropriate and complied with	100%	100%	Performance against indicator considered acceptable.
Field documentation complete	All sampling point logs, calibration logs and chain of custody forms	All sampling point logs, calibration logs and chain of custody forms	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Critical samples analysed according to DQO	Refer **Section 7**	Refer **Section 7**	Performance against indicator considered acceptable.
Analytes analysed according to DQO	Refer **Section 7**	Refer **Section 7**	Performance against indicator considered acceptable.
Appropriate laboratory analytical methods and LORs	Refer **Section 7**	Refer **Section 7**	Performance against indicator considered acceptable.
Sample documentation complete	All sample receipt advices, all certificates of analysis	100%	Performance against indicator considered acceptable.
Sample extraction and holding times complied with	Refer **Section 7**	100%	Performance against indicator considered acceptable.

The data collected is considered to be adequately complete within the objectives and constraints of the project.

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10.2. Comparability

An assessment of the comparability of data collected was undertaken, and the results presented in **Table 10.2**.

Table 10.2 Comparability DQI

Field Considerations	**Target**	**Actual**	**Comment**
Same SOPs used on each occasion	100%	100%	Performance against indicator considered acceptable.
Climatic conditions	Samples stored in insulated containers with ice, immediately after collection	100%	Performance against indicator considered acceptable.
Same types of samples collected, and handled/preserved in same manner	All soil samples same size, all stored in insulated containers with ice	100%	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Same analytical methods used by primary laboratory	Refer **Section 7**	100%	Performance against indicator considered acceptable.
Same LORs at primary laboratory	Refer **Section 7**	100%	Performance against indicator considered acceptable.
Same laboratory for primary sample analysis	All primary samples to Eurofins MGT	100%	Performance against indicator considered acceptable.
Same analytical measurement units	Refer **Section 7**	100%	Performance against indicator considered acceptable.

The data collected is considered to be adequately comparable.

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10.3. Representativeness

An assessment of the representativeness of data collected was undertaken, and the results presented in **Table 10.3**.

Table 10.3 Representativeness DQI

Field Considerations	**Target**	**Actual**	**Comment**
Appropriate media sampled according to DQO	Refer **Section 7**	100%	Performance against indicator considered acceptable.
Media identified in DQO sampled	Refer **Section 7**	100%	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Samples analysed according to DQO	Refer **Section 7**	Refer comments	Performance against indicator considered acceptable.

The data collected is considered to be adequately complete within the objectives and constraints of the project.

10.4. Precision

An assessment of the precision of data collected was undertaken, and the results presented in **Table 10.4**.

Table 10.4 Precision DQI

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Field Considerations	Target	Actual	Comment
Field duplicate / triplicate RPD	Minimum 5% duplicates and triplicates	Soil 6.25 % duplicates and 6.25 % triplicates Groundwater 12.5 % duplicates and 12.5 % triplicates	**Parent duplicate/triplicate relationships are as follows**: Soil DUP01/1A – BH01-0.0-0.2 DUP02/2A – BH31-0.0-0.2 DUP03/3A – BH07-0.0-0.2 DUP04/4A – BH08-0.0-0.2 DUP05/5A – BH54-0.0-0.2 DUP06/6A – BH98-0.0-0.2 DUP07/7A – TP09-0.0-0.2 DUP08/8A – TP16-0.0-0.2 DUP09/9A – TP12-0.0-0.2 DUP10/10A – BH79-0.0-0.2 DUP11/11A – BH62-0.0-0.15 DUP12/12A – BH64-0.0-0.1 DUP13/13A – BH68-0.0-0.1 DUP14/14A – BH97-0.0-0.2 Groundwater DUP01/1A – MW01 **Exceedances of criteria included:** No exceedances in soil Groundwater Nickel - DUP-1A/MW01. The difference in nickel concentration between the primary and triplicate groundwater sample was 0.08mg/L. Both contaminant concentrations were detected by the laboratory to be within the same order of magnitude as nickel concentrations detected within the other groundwater samples across the site. Therefore, the detected concentrations of nickel in groundwater samples DUP-1A/MW01 are considered representative background concentrations. As a conservative approach, AG will consider the highest concentration when determining contamination concentrations at the site. Performance against indicator considered acceptable. Refer to **Table LAR3**
	No limit for analytical results <10 times LOR	Nil	
	50% for analytical results 10-20 times LOR	Nil	
	30% for analytical results >20 times LOR	Nil	

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SOPs appropriate and complied with	100%	100%	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Laboratory duplicates	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.

The data collected is considered to be adequately precise.

10.5. Accuracy

An assessment of accuracy of data collected was undertaken, and the results presented in **Table 10.5**

Table 10.5 Accuracy DQI

Field Considerations	**Target**	**Actual**	**Comment**
Rinsate blanks	Less than laboratory limit of reporting	Not applicable	Not applicable
Field trip spikes	Recoveries between 60% and 140%	Recoveries were between 96% and 110%	Performance against indicator considered acceptable.
Field trip blanks	Analyte concentration <LOR	Analyte concentrations were <LOR	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Laboratory method blank	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.
Matrix spike recovery	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.
Surrogate spike recovery	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.
Laboratory control sample recovery	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.

The data collected is considered to be adequately accurate.

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11. DISCUSSION

11.1. Laboratory Analytical Results – Soil

11.1.1. Human Health - Direct Contact

Metals

The concentrations of arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

Duplicate soil sample DUP-07 returned laboratory analytical results for copper and nickel that exceeded the applicable adopted direct contact human health exposure criteria with extremely high concentrations (copper = 110,000mg/kg and nickel = 1,600mg/kg). The primary soil sample TP09-0.0-0.2 and the triplicate soil sample DUP-7A collected from the same sampling point (TP09), returned analytical results for copper and nickel that do not exceed the applicable adopted direct contact human health exposure criteria. As such, AG requested the NATA accredited laboratory retest soil sample DUP-07 for heavy metals, to ensure the exceedances are credible.

The concentrations of copper and nickel in the soil sample reanalysed (DUP-07), were less than the applicable adopted direct contact human health exposure criteria. Therefore, three soil samples collected from sampling point (TP09-0.0-0.2) returned contaminant concentrations for copper and nickel below the applicable adopted site criteria, indicating the soil is suitable for reuse onsite under the proposed land use criteria.

PAHs

The concentrations of naphthalene detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

The concentrations of benzo(a)pyrene TEQ detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

The concentration of total PAH detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

TRH

The concentrations of TRH C_6-C_{10}, >C_{10}-C_{16}, >C_{16}-C_{34} and >C_{34}-C_{40} detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria or less than the applicable adopted concentration criteria.

BTEX

The concentrations of benzene, toluene, ethyl benzene and xylenes detected in the soil samples analysed, were less than the laboratory limits of reporting or less than the applicable adopted concentration criteria.

OCP & OPP

The concentration of relevant OCP & OPP compounds detected in the soil samples analysed, were less than the laboratory limits of reporting or less than the applicable adopted concentration criteria.

PCB

The concentration of relevant PCB compounds detected in the soil samples analysed, were less than the laboratory limits of reporting or less than the applicable adopted concentration criteria.

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Phenols

The concentrations of halogenated and non-halogenated phenols detected in the soil samples analysed, were less than the laboratory limit of reporting or less than the applicable adopted concentration criteria.

Non-Friable Asbestos Containing Material

Non-friable asbestos containing material was not detected within the soil samples analysed, with the exception of:

- TP09–FCS: chrysotile asbestos detected on site surface;
- TP53–FCS: chrysotile and amosite asbestos detected in fill soils;
- TP56–FCS: chrysotile asbestos detected in fill soils;
- FCS–BH59: chrysotile asbestos detected on site surface;
- FCS–BH101: chrysotile asbestos detected on site surface; and
- TP101–FCS: chrysotile asbestos detected on site surface.

Asbestos Fines / Friable Asbestos

The concentration of friable asbestos and asbestos fines (FA and AF) detected in the relevant soil samples analysed were less than the applicable adopted health screening level (0.001 % w/w), with the exception of:

- BH39-0.0-0.2 – FA: chrysotile asbestos detected in weathered fibre cement fragment. Total estimated asbestos concentration in FA = 0.043%;

Friable asbestos was detected in weathered fibre cement material at concentrations below the laboratory limit of reporting (LOR) and applicable adopted health screening level (0.001% w/w) within the following sample:

- BH21-0.1-0.3.

11.1.2. Human Health – Inhalation / Vapour Intrusion

TRH

The concentrations of TRH C_6-C_{10} (minus BTEX) and >C_{10}-C_{16} (minus naphthalene) detected in the soil samples analysed, were less than the applicable adopted inhalation / vapour intrusion human health exposure criteria.

BTEX

The concentrations of benzene, toluene, ethyl benzene and xylenes detected in the soil samples analysed, were less than the laboratory limits of reporting.

PAHs

The concentrations of naphthalene detected in the soil samples analysed, were less than the applicable adopted inhalation / vapour intrusion human health exposure criteria.

11.1.3. Aesthetics

There were no highly malodorous site media (e.g. strong residual petroleum hydrocarbon odours, hydrogen sulphide in site media, organosulfur compounds), no hydrocarbon sheen on surface water, no discoloured chemical deposits or soil staining with chemical waste, no large monolithic deposits of

otherwise low risk material (e.g. gypsum as powder or plasterboard, cement kiln dust), no presence of putrescible refuse including material that may generate hazardous levels of methane such as a deep-fill profile of green waste or large quantities of timber waste, and no soils containing residue from animal burial (e.g. former abattoir sites) noted onsite.

11.1.4. Terrestrial ecosystem / Ecological health

Ecological Screening Levels (ESLs)

The concentrations of relevant contaminants of concern detected in the soil samples analysed were less than the applicable adopted ecological screening levels (ESL) with the exception of:

- TRH >C10-C16 (F2) in soil samples (BH62_0.0-0.15, BH64_0.0-0.1, BH78_0.0-0.2 and BH86_0.0-0.2); and
- TRH >C16-C34 (F3) in soil sample (BH62_0.0-0.15).

The detected concentrations of TRH >C10-C16 (F2) in the soil samples analysed were subjected to a statistical analysis using ProUCL 5.1. The maximum value of the data set was 210 mg/kg, the standard deviation of the data set was 19.37, while the 95% upper confidence limit was 56.28, which is less than the adopted ESL criteria for TRH >C10-C16 (F2). A copy of the TRH >C10-C16 (F2) ProUCL output is presented in **Appendix H.**

The detected concentrations of TRH >C16-C34 (F3) in the soil samples analysed were subjected to a statistical analysis using ProUCL 5.1. The maximum value of the data set was 1,800 mg/kg, the standard deviation of the data set was 188.3, while the 95% upper confidence limit was 179, which is less than the adopted ESL criteria for TRH >C16-C34 (F3). A copy of the TRH >C16-C34 (F3) ProUCL output is presented in **Appendix H.**

Ecological Investigations Levels (EILs)

The concentrations of relevant contaminants of concern detected in the soil samples analysed were less than the applicable adopted site-specific ecological investigation levels (EIL), with the exception of:

- Nickel in soil samples (TP12-2.6-2.8 and BH22_0.8-1.0).

The detected concentrations of nickel in the soil samples analysed were subjected to a statistical analysis using ProUCL 5.1. The maximum value of the data set was 73 mg/kg, the standard deviation of the data set was 8.257, while the 95% upper confidence limit was 11.88, which is less than the adopted EIL criteria for nickel. A copy of the nickel ProUCL output is presented in **Appendix H.**

11.1.5. TPH Management Limits

The concentrations of TRH C_6-C_{10}, >C_{10}-C_{16}, >C_{16}-C_{34} and >C_{34}-C_{40} detected in the soil samples analysed, were less than the applicable adopted TPH management limits or less than laboratory limits of reporting.

11.2. Laboratory Analytical Results – Groundwater

The laboratory analytical results for the groundwater samples were compared to relevant fresh and marine water quality guidelines in ANZECC & ARMCANZ (2000). The concentrations of the contaminants of potential concern analysed were less than the applicable ANZECC & ARMCANZ (2000) trigger values (95% species protection level), with the exception of the following:

- Cadmium – MW01 (0.0017 mg/L), MW02 (0.0003 mg/L), MW03 (0.0005 mg/L), MW05 (0.013 mg/L) and MW08 0.016 mg/L);

- Copper – MW02 (0.03 mg/L), MW03 (0.007 mg/L), MW04 (0.022 mg/L), MW05 (0.003 mg/L) and MW08 0.002 mg/L);
- Nickel – MW01 (0.022mg/L), MW02 (0.012 mg/L), MW03 (0.067 mg/L), MW04 (0.062 mg/L), MW05 (0.021 mg/L) and MW08 (0.034 mg/L);
- Zinc – MW01 (0.048 mg/L), MW02 (0.076 mg/L), MW03 (0.21 mg/L), MW04 (0.023 mg/L), MW05 (0.089 mg/L) and MW08 (0.77 mg/L); and
- Ammonia – MW04 (1.2 mg/L).

As contaminant concentrations were detected by the laboratory to be within the same order of magnitude as groundwater migrates across the site, no significant contribution to the CoPC are attributed to historic or on-going land-use activities. Therefore, the detected concentrations of CoPC in groundwater at the site are considered representative background concentrations of surrounding commercialised environments.

The samples were also compared to the Groundwater Health Screening Levels for vapour intrusion (clay 2 - 4m) for a residential land use. All groundwater samples returned concentrations lower than the adopted criteria as per Table 1A (4) of ASC NEPM 2013.

MAHs

The samples collected from groundwater monitoring wells MW01, MW02, MW03, MW04, MW05 and MW08 returned laboratory analytical results for MAHs less than the laboratory limit of reporting.

PAHs

The samples collected from groundwater monitoring wells MW01, MW02, MW03, MW04, MW05 and MW08 returned laboratory analytical results for naphthalene and benzo(a)pyrene less than the laboratory limit of reporting.

TRHs

The samples collected from groundwater monitoring wells MW01, MW02, MW03, MW04, MW05 and MW08 returned laboratory analytical results for TRHs above the laboratory limit of reporting.

VOCs

The samples collected from groundwater monitoring wells MW01, MW02, MW03, MW04, MW05 and MW08 returned laboratory analytical results for VOCs less than the laboratory limit of reporting.

PCBs

The samples collected from groundwater monitoring wells MW01, MW02, MW03, MW04, MW05 and MW08 returned laboratory analytical results for PCBs less than the laboratory limit of reporting.

OCPs

The samples collected from groundwater monitoring wells MW01, MW02, MW03, MW04, MW05 and MW08 returned laboratory analytical results for OCPs less than the laboratory limit of reporting.

OPPs

The samples collected from groundwater monitoring wells MW01, MW02, MW03, MW04, MW05 and MW08 returned laboratory analytical results for OPPs less than the laboratory limit of reporting.

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12. REVISED CONCEPTUAL SITE MODEL

Following a review of previous contaminations assessment reports and subsequent intrusive fieldwork carried out by AG, the areas of environmental concern (AEC) and contaminants of potential concern (COPC) have been revised and updated. The current AEC identified and associated COPC are presented in **Table 12.1.**

Table 12.1: Revised AEC and COPC

Area of Environmental Concern	Sampling Points	Contaminants of Concern	Potentially Affected mediums	Exposure risk
AEC01	BH39, EBH1, EBH2, EBH3, EBH5 and BH59	Friable asbestos within fill soils and ACM on surface.	Soil	Human health – direct contact
	BH03 and S2	Lead, cadmium and zinc	Soil	Human health – direct contact
AEC02	BH21, EBH24 and EBH25	Friable asbestos within fill soils	Soil	Human health – direct contact
AEC03	BH/TP101, TP09, TP53, TP56	ACM on surface and within fill soils.	Soil	Human health – direct contact
AEC04	Potential Underground storage or petroleum-based product onsite (refer JBS&G 2018).	Metals, PAH, BTEX, TRH.	Soil and groundwater	Human health – direct contact and inhalation vapour intrusion
AEC05	Existing Building Footprints (inaccessible)	Metals, TRH, BTEX, PAH, PCB, OCP/OPP, Phenols and Asbestos (0.001%).	Soil	Human health – direct contact

The potential contamination pathways are considered to be as follows:

- Inhalation/ingestion of contaminants released in dust during redevelopment by site workers; and
- Direct contact with airborne fibres or CoPC following disturbance of soil.

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Relevant potential receptors are considered to include:

- Onsite construction and maintenance workers;
- Third parties during construction (adjacent site users and adjacent residents);
- Future residents/end users; and
- Neighbouring residential land users.

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13. CONCLUSIONS AND RECOMMENDATIONS

Based on AG's assessment of the desktop review information, fieldwork data and laboratory analytical results, in the context of the proposed redevelopment scenario, AG makes the following conclusions:

Soil Assessment

- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable direct contact human health exposure risk;
- the detected concentrations of asbestos fines/ friable asbestos and non-friable asbestos containing material in the soil samples analysed are considered likely to present an unacceptable human health exposure risk;
- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable inhalation / vapour intrusion exposure risk;
- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable TPH management limit exposure risk; and
- the detected concentrations of identified contaminants of potential concern in the soil samples analysed are considered unlikely to present an unacceptable aesthetics risk;

Groundwater Assessment

- the detected concentrations of contaminants of potential concern in groundwater are considered unlikely to present a risk to surrounding aquatic environments;
- All groundwater samples returned concentrations less than the adopted Groundwater Health Screening Levels for vapour intrusion (clay 2 - 4m) for a residential land use setting as per Table 1A (4) of NEPM 2013; and
- the detected concentrations of contaminants of potential concern in the groundwater samples analysed are considered unsuitable for discharge to municipal stormwater without further assessment/treatment due to the detected concentrations of the contaminants of concern analysed.

Based on these conclusions, AG makes the following recommendations:

- Consideration should be given to the preparation of a supplementary contamination assessment, to further understand the nature and extent of contamination identified onsite and address data gaps presented by building footprints, previous contamination assessments and inaccessible areas of environmental concern;
- Preparation of a remedial action plan (RAP) will be required to detail the works needed to adequately delineate, remediate and validate the areas of concern that present an unacceptable contamination risk;
- groundwater assessed at the site is unsuitable for discharge to municipal stormwater without further assessment/treatment due to the detected concentrations of the contaminants of concern tested. If groundwater is expected to be encountered during the proposed development, a groundwater management plan would be required;
- the preparation of any supplementary contamination assessments, remedial action plans and/or groundwater management plans should be completed by an appropriately experienced environmental consultant;

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- As per NSW WHS Regulations, any removal of friable asbestos requires the engagement of a Class A licensed asbestos removalist and a pre-notification to SafeWork NSW, with accompanying air monitoring during the works and clearances post completion to be conducted by a licensed asbestos assessor (LAA);
- Following remediation of the identified contamination, validation sampling and a site validation report will be required to confirm the effectiveness of the remedial works; and
- Any soil proposed for disposal should be classified and disposed of as per the NSW EPA *Waste Classification Guidelines*, 2014 with all disposal documentation retained by the client for inclusion within the site validation report.

This report, including its conclusions and recommendations, must be read in conjunction with the limitations presented in **Section 144**.

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14. STATEMENT OF LIMITATIONS

The findings presented in this report are based on specific searches of relevant, government historical databases and anecdotal information that were made available during the course of this investigation. To the best of our knowledge, these observations represent a reasonable interpretation of the general condition of the site at the time of report completion.

This report has been prepared solely for the use of the client to whom it is addressed and no other party is entitled to rely on its findings.

No warranties are made as to the information provided in this report. All conclusions and recommendations made in this report are of the professional opinions of personnel involved with the project and while normal checking of the accuracy of data has been conducted, any circumstances outside the scope of this report or which are not made known to personnel and which may impact on those opinions is not the responsibility of Alliance Geotechnical Pty Ltd. Should information become available regarding conditions at the site including previously unknown sources of contamination, AG reserves the right to review the report in the context of the additional information.

This report must be reviewed in its entirety and in conjunction with the objectives, scope and terms applicable to AG's engagement. The report must not be used for any purpose other than the purpose specified at the time AG was engaged to prepare the report.

Logs, figures, and drawings are generated for this report based on individual AG consultant interpretations of nominated data, as well as observations made at the time site walkover/s were completed.

Data and/or information presented in this report must not be redrawn for its inclusion in other reports, plans or documents, nor should that data and/or information be separated from this report in any way.

Should additional information that may impact on the findings of this report be encountered or site conditions change, AG reserves the right to review and amend this report.

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15. REFERENCES

National Environment Protection Council (NEPC) 1999a, '*Schedule B (1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure (NEPM)* as amended in May 2013'.

National Environment Protection Council (NEPC) 1999b, '*Schedule B (2) Guideline on Site Characterisation, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as* amended in May 2013'.

NSW DEC 2006, *'Contaminated Sites: Guidelines for the NSW Site Auditor Scheme* (2nd edition)'.

NSW EPA 1995, '*Contaminated Sites: Sampling Design Guidelines'.*

NSW OEH 2011, 'Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites'.

WA DOH 2009, '*Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia'* dated May 2009.

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SITE FIGURES

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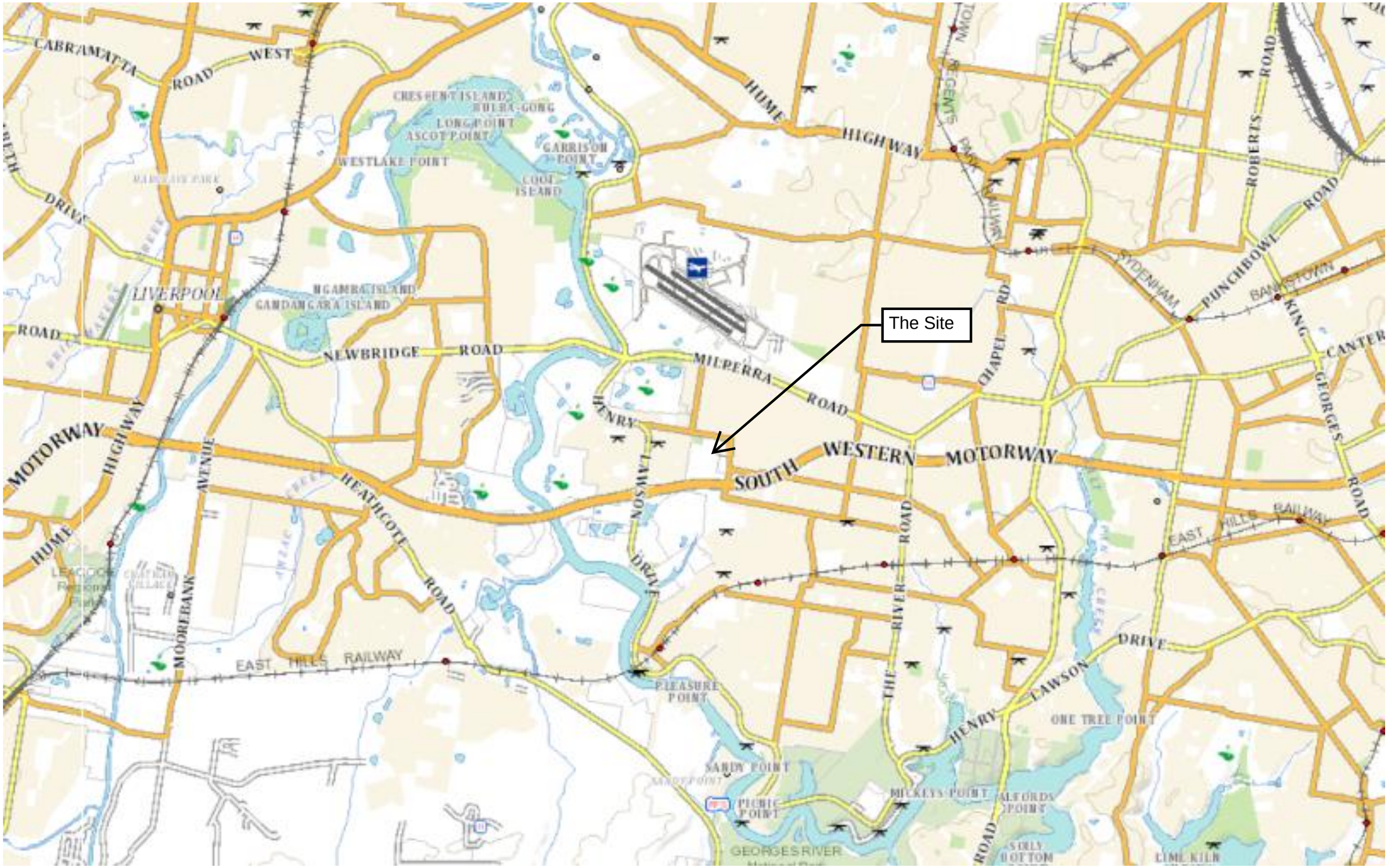

Alliance Geotechnical ENGINEERING | ENVIRONMENTAL | TESTING Manage the earth, eliminate the risk	**Site Locality**			
	Client Name:	Mirvac Homes NSW PTY Ltd	Figure Number:	1
	Project Name:	Stage 2 Detailed Site Investigation	Figure Date:	10 December 2019
	Project Location:	Western Sydney University – Milperra Campus – 2 Bullecourt Avenue, Milperra NSW	Report Number:	9996-ER-1-1

Scale: 100.00 m

Alliance Geotechnical ENGINEERING | ENVIRONMENTAL | TESTING Manage the earth, eliminate the risk	Site Layout Plan				
	Client Name:	Mirvac Homes NSW PTY Ltd	N	Figure Number:	2
	Project Name:	Stage 2 Detailed Site Investigation		Figure Date:	10 December 2019
	Project Location:	Western Sydney University – Milperra Campus – 2 Bullecourt Avenue, Milperra NSW		Report Number:	9996-ER-1-1

Scale: 100.00 m

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Areas of Environmental Concern

Client Name:	Mirvac Homes NSW PTY Ltd	Figure Number:	3
Project Name:	Stage 2 Detailed Site Investigation	Figure Date:	10 December 2019
Project Location:	Western Sydney University – Milperra Campus – 2 Bullecourt Avenue, Milperra NSW	Report Number:	9996-ER-1-1

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Sampling Point Layout Plan

Client Name:	Mirvac Homes NSW PTY Ltd	Figure Number:	4
Project Name:	Stage 2 Detailed Site Investigation	Figure Date:	10 December 2019
Project Location:	Western Sydney University – Milperra Campus – 2 Bullecourt Avenue, Milperra NSW	Report Number:	9996-ER-1-1

Scale: 100.00 m

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Inferred Groundwater Flow Direction

Client Name:	Mirvac Homes NSW PTY Ltd	Figure Number:	5
Project Name:	Stage 2 Detailed Site Investigation	Figure Date:	30 January 2020
Project Location:	Western Sydney University – Milperra Campus – 2 Bullecourt Avenue, Milperra NSW	Report Number:	9996-ER-1-1

Scale: 100.00 m

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Exceedances of Criteria

Client Name:	Mirvac Homes NSW PTY Ltd	N	Figure Number:	6
Project Name:	Stage 2 Detailed Site Investigation		Figure Date:	30 January 2020
Project Location:	Western Sydney University – Milperra Campus – 2 Bullecourt Avenue, Milperra NSW		Report Number:	9996-ER-1-1

LABORATORY ANALYTICAL RESULTS SUMMARY TABLES

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Table LAR1
Western Sydney University – Milperra Campus, Bullecourt Avenue, Milperra, NSW 2214
Soil Results & Adopted Site Criteria
9996-ER-1-1

Group	Analyte	Units	PQL	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)					Management Limits for TPH Fractions F1 F4 in soil (mg/Kg) - NEPC 2013	ESLs and EILs - NEPC 2013	Health Investigation Levels for Soil Contaminants - NEPM 2013	Data Set Minimum	Data Set Maximum
					HSL A & HSL B - Low - High density Residential					Residential, Parkland and Public Open Space	Urban Residential and Public Open Space			
				HSL - A Residential (Low Density)	0 m to <1 m	1 m to <2 m	2 m to <4 m	4 m+	Soil Saturation Concentration (Csat)	Fine Soil Texture	Fine Soil Texture	Residential A		
Metals	Arsenic, As	mg/kg	2	-	-	-	-	-	-	-	100	100	2	72
	Cadmium, Cd	mg/kg	0.4	-	-	-	-	-	-	-	20	20	1	1
	Chromium, Cr	mg/kg	5.0	-	-	-	-	-	-	-	190	100	5	51
	Copper, Cu	mg/kg	5.0	-	-	-	-	-	-	-	150	6,000	5	47
	Lead, Pb	mg/kg	5	-	-	-	-	-	-	-	1100	300	6	73
	Mercury (inorganic)	mg/kg	0.10	-	-	-	-	-	-	-	-	40	0.1	0.2
	Nickel, Ni	mg/kg	5.0	-	-	-	-	-	-	-	30	400	5	73
	Zinc, Zn	mg/kg	5.0	-	-	-	-	-	-	-	320	7,400	6	240
PAH	Acenaphthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Acenaphthylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(a)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	0.7	-	< 0.5	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	3	0.6	0.6
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	1.2	1.2
	Benzo(b&j)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(ghi)perylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Dibenzo(ah)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Fluorene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5	< 0.5
	Phenanthrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	0.6
	Pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	0.8
	Total PAH	mg/kg	0.5	-	-	-	-	-	-	-	-	300	< 0.5	2.2
TRH	TRH C10-C36 Total	mg/kg	50	-	-	-	-	-	-	-	-	-	22	170
	TRH C10-C14	mg/kg	20	-	-	-	-	-	-	-	-	-	55	2240
	TRH C15-C28	mg/kg	50	-	-	-	-	-	-	-	-	-	50	1400
	TRH C29-C36	mg/kg	50	-	-	-	-	-	-	-	-	-	51	720
	TRH C6-C9	mg/kg	20	-	-	-	-	-	-	-	-	-	< 20	< 20
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5	< 0.5
	TRH >C10-C16 (F2)	mg/kg	50	3,300	280	NL	NL	NL	560	1,000	120	-	52	210
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	50	-	-	-	-	-	-	-	-	-	52	210
	TRH C10-C40 Total (F bands)	mg/kg	100	-	-	-	-	-	-	-	-	-	110	2550
	TRH >C16-C34 (F3)	mg/kg	100	4,500	-	-	-	-	-	3,500	1,300	-	110	1800
	TRH >C34-C40 (F4)	mg/kg	100	6,300	-	-	-	-	-	10,000	5,600	-	100	610
	TRH C6-C10	mg/kg	20	4,400	-	-	-	-	-	-	-	-	< 20	< 20
	TRH C6-C10 minus BTEX (F1)	mg/kg	20	-	50	90	150	290	850	800	180	-	< 20	< 20
BTEX	Benzene	mg/kg	0.1	100	0.7	1	2	3	430	-	65	-	< 0.1	< 0.1
	Ethylbenzene	mg/kg	0.1	4,500	NL	NL	NL	NL	68	-	125	-	< 0.1	< 0.1
	m/p-xylene	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1	< 0.1
	Toluene	mg/kg	0.1	14,000	480	NL	NL	NL	630	-	105	-	< 0.1	< 0.1
	Total Xylenes	mg/kg	0.3	12,000	110	310	NL	NL	330	-	45	-	< 0.3	< 0.3
OCP	4,4 - DDD	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	4,4 - DDE	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	0.30
	4,4 - DDT	mg/kg	0.05	-	-	-	-	-	-	-	180	-	< 0.05	0.23
	a - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Aldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Aldrin + Dieldrin (total)	mg/kg	0.05	-	-	-	-	-	-	-	6	-	< 0.05	< 0.05
	b - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Chlordanes (total)	mg/kg	0.05	-	-	-	-	-	-	-	50	-	< 0.1	< 0.1
	d - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	DDT + DDE + DDD (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	240	< 0.05	0.41
	Dieldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Endosulfan 1	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Endosulfan 2	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Endrin	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05	< 0.05
	Endrin Aldehyde	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Endrin Ketone	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Heptachlor	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05	< 0.05
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05
	Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05	< 0.05
	Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	-	-	300	< 0.2	< 0.2
	Toxaphene	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 1	< 1
	Vic EPA IWRG 621 OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2	0.41
	Vic EPA IWRG 621 Other OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Alpha + Beta Endosulfan	mg/kg	0.05	-	-	-	-	-	-	-	-	270	0.00	0.00
OPP	Azinphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Bolstar	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Chlorfenvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Chlorpyrifos	mg/kg	0.2	-	-	-	-	-	-	-	-	160	< 0.2	< 0.2
	Chlorpyrifos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Coumaphos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2	< 2
	Demeton-O	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Demeton-S	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Diazinon	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Dichlorvos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Dimethoate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Disulfoton	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	EPN	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Ethion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Ethoprop	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Ethyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Fenitrothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Fensulfothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Fenthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Malathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Merphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Methyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Mevinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Monocrotophos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2	< 2
	Naled	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Omethoate	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2	< 2
	Phorate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Pyrazophos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Ronnel	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Terbufos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Tokuthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
	Trichloronate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2	< 0.2
PCB	Aroclor-1016	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Aroclor-1221	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1	< 0.1
	Aroclor-1232	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Aroclor-1242	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Aroclor-1248	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Aroclor-1254	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Aroclor-1260	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	Total PCB*	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
Halogenated Phenols	2,4,5-Trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 1	< 1
	2,4,6-Trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 1	< 1
	2,4-Dichlorophenol	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	2,6-Dichlorophenol	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	2-Chlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	4-Chloro-3-methylphenol	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 1	< 1
	Pentachlorophenol	mg/kg	1.0	-	-	-	-	-	-	-	-	100	< 1	< 1
	Tetrachlorophenols - Total	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 10	< 10
	Total Halogenated Phenol*	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 1	< 1
Non-Halogenated Phenols	2,4-Dimethylphenol	mg/kg	20.0	-	-	-	-	-	-	-	-	-	< 0.5	< 0.5
	2,4-Dinitrophenol	mg/kg	5.0	-	-	-	-	-	-	-	-	-	< 5	< 5
	2-Cyclohexyl-4,6-dinitrophenol	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 20	< 20
	2-Methyl-4,6-dinitrophenol	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 5	< 5
	2-Methylphenol (o-Cresol)	mg/kg	0.5	-	-	-	-	-	-	-	-	400	< 0.2	< 0.2
	2-Nitrophenol	mg/kg	5.0	-	-	-	-	-	-	-	-	-	< 1	< 1
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4	-	-	-	-	-	-	-	-	400	< 0.4	< 0.4
	4-Nitrophenol	mg/kg	5.0	-	-	-	-	-	-	-	-	-	< 5	< 5
	Dinoseb	mg/kg	20.0	-	-	-	-	-	-	-	-	-	< 20	< 20
	Phenol	mg/kg	0.5	-	-	-	-	-	-	-	-	3000	< 0.5	< 0.5
	Total Non-Halogenated Phenol*	mg/kg	20.0	-	-	-	-	-	-	-	-	-	< 20	< 20

Sample ID	BH01_0.0-0.2	BH01_1.2-1.4	BH02_0.0-0.2	BH02_1.4-1.6	BH03_0.0-0.2	BH03_1.5-1.7	BH04_0.2-0.4	BH04_0.8-1.0	BH05_0.2-0.4	BH05_0.8-1.0	BH06_0.0-0.2	BH06_0.5-0.7	BH07_0.0-0.2	BH08_0.0-0.2	BH08_0.5-0.7	TP09-0.0-0.2	TP09-0.7-0.9	TP09-1.1-1.3	BH10_0.1-0.3	BH11_0.0-0.2	TP12-0.0-0.2	TP12-0.9-1.1	TP12-2.6-2.8	TP13-0.0-0.2	TP13-1.9-2.1	BH14_0.0-0.2	BH15_0.0-0.2	BH16_0.0-0.2	TP16-0.0-0.2	TP16-0.9-1.1
Reference	S19-De29140	S19-De29141	S19-De29142	S19-De29143	S19-De29144	S19-De29145	S19-De29146	S19-De29147	S19-De29148	S19-De29149	S19-De29150	S19-De29151	S19-De29152	S19-De29154	S19-De29155	S20-Ja12898	S20-Ja12899	S20-Ja12900	S19-De29156	S19-De29157	S20-Ja12935	S20-Ja12901	S20-Ja12902	S20-Ja12903	S20-Ja12904	S19-De29158	S19-De29159	S19-De29160	S20-Ja12938	S20-Ja12905
Date Sampled	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	18/12/2019	18/12/2019	15/01/2020	15/01/2020	15/01/2020	16/12/2019	16/12/2019	15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020	16/12/2019	16/12/2019	16/12/2019	15/01/2020	15/01/2020
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Arsenic, As	6.3	4.5	6.1	9.6	11	6.6	8.9	4.7	9.8	7.1	5.2	9.5	11	3	11	12	5.8	6.5	< 2	72	8.4	< 2	4.2	5.8	3.9	7.9	8.8	11	5.4	4
Cadmium, Cd	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chromium, Cr	17	16	6.9	13	13	19	20	8.5	22	14	12	28	20	6.4	30	16	11	21	< 5	7	18	5.1	9.4	12	8.2	13	8.4	10	9	9.1
Copper, Cu	14	12	10	20	13	15	24	27	19	14	18	12	16	23	23	20	40	9	23	9.3	26	14	34	37	34	8.5	11	11	22	41
Lead, Pb	16	13	28	17	23	15	19	16	24	15	73	15	25	31	15	25	26	13	27	14	30	6.1	22	27	23	16	22	15	19	29
Mercury (inorganic)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel, Ni	5	3	5.4	< 5	9.2	< 5	< 5	< 5	< 5	5.6	< 5	12	< 5	7.7	23	< 5	< 5	< 5	5.9	8.8	8.3	73	27	18	< 5	< 5	< 5	17	28	
Zinc, Zn	6	240	43	13	55	43	50	9.7	14	20	27	7	58	13	32	91	24	51	120	9.7	85	34	79	54	240	97	82	17	41	47	79	160
Acenaphthene	< 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	< 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
Acenaphthylene	< 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	< 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
Anthracene	< 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	< 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
Benzo(a)anthracene	< 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	< 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
Benzo(a)pyrene	< 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	< 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
Carcinogenic PAHs, BaP TEQ <LOR=0	< 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	< 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
Carcinogenic PAHs, BaP TEQ <LOR=LOR	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Benzo(b&j)fluoranthene	< 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	< 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
Benzo(ghi)perylene	< 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	< 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
Benzo(k)fluoranthene	< 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	< 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
Chrysene	< 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	< 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
Dibenzo(ah)anthracene	< 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	< 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
Fluoranthene	< 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	< 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
Fluorene	< 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	< 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
Indeno(1,2,3-cd)pyrene	< 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	< 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
Naphthalene	< 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	< 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
Phenanthrene	< 0.5	0.6	< 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	< 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
Pyrene	< 0.5	0.8	< 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	< 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
Total PAH	< 0.5	2.2	< 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	< 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
TRH C10-C36 Total	< 20	170	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	80	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
TRH C10-C14	< 50	< 50	< 50	250	< 50	< 50	< 50	< 50	< 50	< 50	800	69	67	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	94	< 50	< 50	< 50
TRH C15-C28	< 50	< 50	< 50	60	< 50	< 50	< 50	< 50	< 50	< 50	270	69	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
TRH C29-C36	< 50	< 50	< 50	190	< 50	< 50	< 50	< 50	< 50	< 50	450	< 50	67	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	94	< 50	< 50	< 50
TRH C6-C9	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20

Table LAR1
Western Sydney University – Milperra Campus, Bullecourt Avenue, Milperra, NSW 2214
Soil Results & Adopted Site Criteria
9996-ER-1-1

Group	Analyte	Units	PQL	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)					Management Limits for TPH Fractions F1 F4 in soil (mg/Kg) - NEPC 2013	ESLs and EILs - NEPC 2013	Health Investigation Levels for Soil Contaminants - NEPM 2013	Data Set Minimum
				HSL - A Residential (Low Density)	HSL A & HSL B - Low - High density Residential				Soil Saturation Concentration (Csat)	Residential, Parkland and Public Open Space	Urban Residential and Public Open Space	Residential A	
					0 m to <1 m	1 m to <2 m	2 m to <4 m	4 m+		Fine Soil Texture	Fine Soil Texture		
Metals	Arsenic, As	mg/kg	2	-	-	-	-	-	-	-	100	100	2
	Cadmium, Cd	mg/kg	0.4	-	-	-	-	-	-	-	20	20	1
	Chromium, Cr	mg/kg	5.0	-	-	-	-	-	-	-	190	100	5
	Copper, Cu	mg/kg	5.0	-	-	-	-	-	-	-	150	6,000	5
	Lead, Pb	mg/kg	5	-	-	-	-	-	-	-	1100	300	6
	Mercury (inorganic)	mg/kg	0.10	-	-	-	-	-	-	-	-	40	0.1
	Nickel, Ni	mg/kg	5.0	-	-	-	-	-	-	-	30	400	5
	Zinc, Zn	mg/kg	5.0	-	-	-	-	-	-	-	320	7,400	6
PAH	Acenaphthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Acenaphthylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benz(a)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	0.7	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	3	0.6
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	1.2
	Benzo(b&j)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(ghi)perylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Dibenzo(ah)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluorene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	Phenanthrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Total PAH	mg/kg	0.5	-	-	-	-	-	-	-	-	300	< 0.5
TRH	TRH C10-C36 Total	mg/kg	50	-	-	-	-	-	-	-	-	-	22
	TRH C10-C14	mg/kg	20	-	-	-	-	-	-	-	-	-	55
	TRH C15-C28	mg/kg	50	-	-	-	-	-	-	-	-	-	50
	TRH C29-C36	mg/kg	50	-	-	-	-	-	-	-	-	-	51
	TRH C6-C9	mg/kg	20	-	-	-	-	-	-	-	-	-	< 20
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	TRH >C10-C16 (F2)	mg/kg	50	3,300	280	NL	NL	NL	560	1,000	120	-	52
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	50									-	52
	TRH C10-C40 Total (F bands)	mg/kg	100	-	-	-	-	-	-	-	-	-	110
	TRH >C16-C34 (F3)	mg/kg	100	4,500	-	-	-	-	-	3,500	1,300	-	110
	TRH >C34-C40 (F4)	mg/kg	100	6,300	-	-	-	-	-	10,000	5,600	-	100
	TRH C6-C10	mg/kg	20	4,400	-	-	-	-	-	-	-	-	< 20
	TRH C6-C10 minus BTEX (F1)	mg/kg	20	-	50	90	150	290	850	800	180	-	< 20
BTEX	Benzene	mg/kg	0.1	100	0.7	1	2	3	430	-	65	-	< 0.1
	Ethylbenzene	mg/kg	0.1	4,500	NL	NL	NL	NL	68	-	125	-	< 0.1
	m/p-xylene	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Toluene	mg/kg	0.1	14,000	480	NL	NL	NL	630	-	105	-	< 0.1
	Total Xylenes	mg/kg	0.3	12,000	110	310	NL	NL	330	-	45	-	< 0.3
OCP	4,4 - DDD	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDE	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDT	mg/kg	0.05	-	-	-	-	-	-	-	180	-	< 0.05
	a - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin + Dieldrin (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	b - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Chlordanes (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	50	< 0.1
	d - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	DDT + DDE + DDD (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	240	< 0.05
	Dieldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 1	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 2	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Endrin Aldehyde	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin Ketone	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Heptachlor	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	-	-	300	< 0.2
	Toxaphene	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 1
	Vic EPA IWRG 621 OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Vic EPA IWRG 621 Other OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Alpha + Beta Endosulfan	mg/kg	0.05	-	-	-	-	-	-	-	-	270	0.00
OPP	Azinphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Bolstar	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorfenvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorpyrifos	mg/kg	0.2	-	-	-	-	-	-	-	-	160	< 0.2
	Chlorpyrifos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Coumaphos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Demeton-O	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Demeton-S	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Diazinon	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dichlorvos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dimethoate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Disulfoton	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	EPN	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethoprop	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenitrothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fensulfothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Malathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Merphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Methyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Mevinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Monocrotophos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Naled	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Omethoate	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Phorate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pyrazophos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ronnel	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Terbufos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tokuthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Trichloronate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
PCB	Aroclor-1016	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1221	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Aroclor-1232	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1242	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1248	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1254	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1260	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Total PCB*	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
Halogenated Phenols	2,4,5-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4,6-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2,6-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2-Chlorophenol	mg/kg	0.5									-	< 0.5
	4-Chloro-3-methylphenol	mg/kg	1.0									-	< 1
	Pentachlorophenol	mg/kg	1.0									100	< 1
	Tetrachlorophenols - Total	mg/kg	1.0									-	< 10
	Total Halogenated Phenol*	mg/kg	1.0									-	< 1
Non-Halogenated Phenols	2,4-Dimethylphenol	mg/kg	20.0									-	< 0.5
	2,4-Dinitrophenol	mg/kg	5.0									-	< 5
	2-Cyclohexyl-4,6-dinitrophenol	mg/kg	0.2									-	< 20
	2-Methyl-4,6-dinitrophenol	mg/kg	1.0									-	< 5
	2-Methylphenol (o-Cresol)	mg/kg	0.5									400	< 0.2
	2-Nitrophenol	mg/kg	5.0									-	< 1
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4									400	< 0.4
	4-Nitrophenol	mg/kg	5.0									-	< 5
	Dinoseb	mg/kg	20.0									-	< 20
	Phenol	mg/kg	0.5									3000	< 0.5
	Total Non-Halogenated Phenol*	mg/kg	20.0									-	< 20

Sample ID	TP16-1.9-2.1	TP17-0.9-1.1	TP17-1.9-2.1	BH17_0.0-0.2	BH18_0.2-0.4	BH19_0.0-0.2	BH20_0.0-0.15	BH21_0.1-0.3	BH22_0.8-1.0	TP22-0.0-0.2	TP22-1.9-2.1	BH23_0.0-0.2	BH24-0.0-0.2	BH25_0.0-0.2	BH26_0.0-0.2	BH27-0.0-0.2	BH28_0.0-0.2	BH28_0.8-1.0	BH29_0.0-0.2	BH30_0.0-0.2	BH31_0.0-0.2	BH32_0.0-0.2	BH33_0.0-0.2	BH34_0.0-0.2	BH35_0.0-0.2	BH36_0.0-0.2	BH36_1.0-1.2	BH36_2.0-2.2	BH37_0.3-0.5	BH38_0.0-0.2	BH39-0.0-0.2
Reference	S20-Ja12906	S20-Ja12907	S20-Ja12908	S19-De29161	S19-De29162	S19-De29163	S19-De29164	S19-De29165	S19-De29166	S20-Ja12909	S20-Ja12910	S19-De29167	S20-Ja80478	S19-De29168	S19-De29169	S20-Ja80479	S19-De29170	S19-De29171	S19-De29172	S19-De29173	S19-De29174	S19-De29175	S19-De29176	S19-De29177	S19-De29178	S19-De29179	S19-De29180	S19-De29181	S19-De29182	S19-De29183	S20-Ja80480
Date Sampled	15/01/2020	15/01/2020	15/01/2020	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	15/01/2020	15/01/2020	16/12/2019	9/01/2020	16/12/2019	18/12/2019	9/01/2020	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	9/01/2020
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Arsenic, As	4.8	3.5	2.9	16	6.6	10	5.2	15	6.6	10	11	< 2	4.4	2.1	3.6	6.8	2.9	4.3	19	15	4.8	6.3	14	12	11	10	13	12	8.3	2.7	7.2
Cadmium, Cd	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chromium, Cr	6.7	7.9	5.8	19	9.1	16	6.5	7.5	11	14	7.7	< 5	11	6.2	8.2	11	7.1	27	10	8.3	9.8	17	14	17	22	15	22	27	17	7.2	17
Copper, Cu	16	30	13	9.7	12	15	38	19	47	16	35	5.3	18	6.5	11	14	5.5	< 5	8.8	12	8.6	9.9	16	13	16	22	17	24	14	29	22
Lead, Pb	11	24	19	18	18	31	66	40	24	20	25	6.8	29	14	20	16	7.9	8.9	18	39	18	14	16	19	20	41	43	20	19	44	30
Mercury (inorganic)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel, Ni	8	19	< 5	< 5	< 5	7.2	< 5	< 5	38	9.5	22	< 5	8.5	< 5	< 5	6.9	< 5	< 5	< 5	< 5	6.3	16	< 5	5.8	6.6	6.2	< 5	< 5	6.5	7.9
Zinc, Zn	36	100	18	36	72	72	160	56	180	52	100	19	75	32	61	44	27	6.1	40	30	27	16	67	42	43	84	51	23	38	120	97
Acenaphthene	< 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	< 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	< 0.5
Acenaphthylene	< 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	< 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	< 0.5
Anthracene	< 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	< 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	< 0.5
Benz(a)anthracene	< 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	< 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	< 0.5
Benzo(a)pyrene	< 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	< 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	< 0.5
Carcinogenic PAHs, BaP TEQ <LOR=0	< 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	< 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	< 0.5
Carcinogenic PAHs, BaP TEQ <LOR=LOR	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Benzo(b&j)fluoranthene	< 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	< 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	< 0.5
Benzo(ghi)perylene	< 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	< 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	< 0.5
Benzo(k)fluoranthene	< 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	< 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	< 0.5
Chrysene	< 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	< 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	< 0.5
Dibenzo(ah)anthracene	< 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	< 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	< 0.5
Fluoranthene	< 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	< 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	0.6	< 0.5
Fluorene	< 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	< 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	< 0.5
Indeno(1,2,3-cd)pyrene	< 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	< 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	< 0.5
Naphthalene	< 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	< 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	< 0.5
Phenanthrene	< 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	< 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	< 0.5
Pyrene	< 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	< 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	< 0.5
Total PAH	< 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	< 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	< 0.5
TRH C10-C36 Total	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
TRH C10-C14	< 50	< 50	< 50	< 50	< 50	290	< 50	66	144	< 50	< 50	< 50	< 50	168	65	63	< 50	< 50	< 50	58	< 50	57	< 50	< 50	< 50	106	< 50	< 50	< 50	< 50	112	< 50
TRH C15-C28	< 50	< 50	< 50	< 50	< 50	130	< 50	< 50	72	< 50	< 50	< 50	< 50	82	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
TRH C29-C36	< 50	< 50	< 50	< 50	< 50	160	< 50	66	72	< 50	< 50	< 50	< 50	86	65	63	< 50	< 50	< 50	58	< 50	57	< 50	< 50	< 50	56	< 50	< 50	< 50	58	< 50	< 50
TRH C6-C9	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Naphthalene	< 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	< 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	< 0.5
TRH >C10-C16 (F2)	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
TRH >C10-C16 (F2) - Naphthalene	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
TRH C10-C40 Total (F bands)	< 100	< 100	< 100	< 100	< 100	320	< 100	< 100	120	< 100	< 100	< 100	< 100	130	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
TRH >C16-C34 (F3)	< 100	< 100	< 100	< 100	< 100

Table LAR1
Western Sydney University – Milperra Campus, Bullecourt Avenue, Milperra, NSW 2214
Soil Results & Adopted Site Criteria
9996-ER-1-1

Group	Analyte	Units	PQL	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)					Management Limits for TPH Fractions F1 F4 in soil (mg/Kg) - NEPC 2013		Health Investigation Levels for Soil Contaminants - NEPM 2013	Data Set Minimum
					HSL A & HSL B - Low - High density Residential					Residential, Parkland and Public Open Space	Urban Residential and Public Open Space		
				HSL - A Residential (Low Density)	0 m to <1 m	1 m to <2 m	2 m to <4 m	4 m+	Soil Saturation Concentration (Csat)	Fine Soil Texture	Fine Soil Texture	Residential A	
Metals	Arsenic, As	mg/kg	2	-	-	-	-	-	-	-	100	100	2
	Cadmium, Cd	mg/kg	0.4	-	-	-	-	-	-	-	20	20	1
	Chromium, Cr	mg/kg	5.0	-	-	-	-	-	-	-	190	100	5
	Copper, Cu	mg/kg	5.0	-	-	-	-	-	-	-	150	6,000	5
	Lead, Pb	mg/kg	5	-	-	-	-	-	-	-	1100	300	6
	Mercury (inorganic)	mg/kg	0.10	-	-	-	-	-	-	-	-	40	0.1
	Nickel, Ni	mg/kg	5.0	-	-	-	-	-	-	-	30	400	5
	Zinc, Zn	mg/kg	5.0	-	-	-	-	-	-	-	320	7,400	6
PAH	Acenaphthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Acenaphthylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(a)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	0.7	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	3	0.6
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	1.2
	Benzo(b&j)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(ghi)perylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Dibenzo(ah)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluorene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	Phenanthrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Total PAH	mg/kg	0.5	-	-	-	-	-	-	-	-	300	< 0.5
TRH	TRH C10-C36 Total	mg/kg	50	-	-	-	-	-	-	-	-	-	22
	TRH C10-C14	mg/kg	20	-	-	-	-	-	-	-	-	-	55
	TRH C15-C28	mg/kg	50	-	-	-	-	-	-	-	-	-	50
	TRH C29-C36	mg/kg	50	-	-	-	-	-	-	-	-	-	51
	TRH C6-C9	mg/kg	20	-	-	-	-	-	-	-	-	-	< 20
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	TRH >C10-C16 (F2)	mg/kg	50	3,300	280	NL	NL	NL	560	1,000	120	-	52
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	50	-	-	-	-	-	-	-	-	-	52
	TRH C10-C40 Total (F bands)	mg/kg	100	-	-	-	-	-	-	-	-	-	110
	TRH >C16-C34 (F3)	mg/kg	100	4,500	-	-	-	-	-	3,500	1,300	-	110
	TRH >C34-C40 (F4)	mg/kg	100	6,300	-	-	-	-	-	10,000	5,600	-	100
	TRH C6-C10	mg/kg	20	4,400	-	-	-	-	-	-	-	-	< 20
	TRH C6-C10 minus BTEX (F1)	mg/kg	20	-	50	90	150	290	850	800	180	-	< 20
BTEX	Benzene	mg/kg	0.1	100	0.7	1	2	3	430	-	65	-	< 0.1
	Ethylbenzene	mg/kg	0.1	4,500	NL	NL	NL	NL	68	-	125	-	< 0.1
	m/p-xylene	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Toluene	mg/kg	0.1	14,000	480	NL	NL	NL	630	-	105	-	< 0.1
	Total Xylenes	mg/kg	0.3	12,000	110	310	NL	NL	330	-	45	-	< 0.3
OCP	4,4 - DDD	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDE	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDT	mg/kg	0.05	-	-	-	-	-	-	-	-	180	< 0.05
	a - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin + Dieldrin (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	b - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Chlordanes (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	50	< 0.1
	d - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	DDT + DDE + DDD (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	240	< 0.05
	Dieldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 1	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 2	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Endrin Aldehyde	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin Ketone	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Heptachlor	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	-	-	300	< 0.2
	Toxaphene	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 1
	Vic EPA IWRG 621 OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Vic EPA IWRG 621 Other OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Alpha + Beta Endosulfan	mg/kg	0.05	-	-	-	-	-	-	-	-	270	0.00
OPP	Azinphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Bolstar	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorfenvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorpyrifos	mg/kg	0.2	-	-	-	-	-	-	-	-	160	< 0.2
	Chlorpyrifos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Coumaphos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Demeton-O	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Demeton-S	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Diazinon	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dichlorvos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dimethoate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Disulfoton	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	EPN	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethoprop	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenitrothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fensulfothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Malathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Merphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Methyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Mevinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Monocrotophos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Naled	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Omethoate	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Phorate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pyrazophos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ronnel	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Terbufos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tokuthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Trichloronate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
PCB	Aroclor-1016	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1221	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Aroclor-1232	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1242	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1248	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1254	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1260	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Total PCB*	mg/kg	0.1	-	-	-	-	-	-	-	-	1	< 0.5
Halogenated Phenols	2,4,5-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4,6-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2,6-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2-Chlorophenol	mg/kg	0.5									-	< 0.5
	4-Chloro-3-methylphenol	mg/kg	1.0									-	< 1
	Pentachlorophenol	mg/kg	1.0									100	< 1
	Tetrachlorophenols - Total	mg/kg	1.0									-	< 10
	Total Halogenated Phenol*	mg/kg	1.0									-	< 1
Non-Halogenated Phenols	2,4-Dimethylphenol	mg/kg	20.0									-	< 0.5
	2,4-Dinitrophenol	mg/kg	5.0									-	< 5
	2-Cyclohexyl-4,6-dinitrophenol	mg/kg	0.2									-	< 20
	2-Methyl-4,6-dinitrophenol	mg/kg	1.0									-	< 5
	2-Methylphenol (o-Cresol)	mg/kg	0.5									400	< 0.2
	2-Nitrophenol	mg/kg	5.0									-	< 1
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4									400	< 0.4
	4-Nitrophenol	mg/kg	5.0									-	< 5
	Dinoseb	mg/kg	20.0									-	< 20
	Phenol	mg/kg	0.5									3000	< 0.5
	Total Non-Halogenated Phenol*	mg/kg	20.0									-	< 20

Sample ID	BH40-0.0-0.2	BH41-0.0-0.2	BH42-0.0-0.2	BH43-0.0-0.2	BH44-0.0-0.2	BH45-0.0-0.2	BH45-0.2-0.4	BH46-0.0-0.2	BH47-0.0-0.2	BH48-0.0-0.2	BH48-0.5-0.7	BH49-0.0-0.2	BH50_0.2-0.4	BH51_0.2-0.4	BH52_0.2-0.4	TP53-0.0-0.2	TP53-1.7-1.9	TP54-0.0-0.2	TP55-0.0-0.2	TP55-0.8-1.0	TP56-0.0-0.2	TP56-0.9-1.1	TP56-1.8-2.0	BH57_0.2-0.4	BH58_0.2-0.4	BH59_0.0-0.05	BH60_0.0-0.2	BH61_0.15-0.3	BH62_0.0-0.15	BH63-0.0-0.2	BH64_0.0-0.1
Reference	S20-Ja44481	S20-Ja44482	S20-Ja44483	S20-Ja44484	S20-Ja44485	S20-Ja44486	S20-Ja44487	S20-Ja44488	S20-Ja44489	S20-Ja44490	S20-Ja44491	S20-Ja44492	S19-De29184	S19-De29185	S19-De29186	S20-Ja12911	S20-Ja12912	S20-Ja44493	S20-Ja12913	S20-Ja12914	S20-Ja12915	S20-Ja12916	S20-Ja12917	S19-De29188	S19-De29189	S19-De29190	S19-De29191	S19-De29192	S19-De29193	S20-Ja44494	S19-De29194
Date Sampled	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	9/01/2020	17/12/2019	17/12/2019	17/12/2019	15/01/2020	15/01/2020	9/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020	15/01/2020	17/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	9/01/2020	17/12/2019
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Arsenic, As	4.9	4.8	5.6	9	6.5	8.4	16	9.5	6.9	7.5	7.3	12	14	13	7.3	4.5	6.5	2.5	7.3	8	6	12	8.9	9.1	8.4	2.3	14	6	< 2	5.9	2.4
Cadmium, Cd	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chromium, Cr	16	13	13	18	40	17	27	12	11	16	16	51	27	30	13	9.3	13	6.8	15	9.4	13	24	25	16	29	8.7	19	17	< 5	16	7.4
Copper, Cu	31	21	21	20	20	11	8.4	15	15	17	9.6	21	32	25	20	11	14	11	8.4	15	19	20	24	41	24	6.1	21	17	15	7.3	23
Lead, Pb	35	26	17	24	23	18	20	18	18	26	17	20	17	14	16	14	22	8.4	13	25	18	27	27	22	13	8.7	15	15	13	23	21
Mercury (inorganic)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel, Ni	5.2	12	13	5.9	34	6.6	< 5	< 5	< 5	8.5	6.1	24	15	18	< 5	< 5	< 5	< 5	< 5	< 5	13	11	< 5	25	5.5	< 5	12	< 5	< 5	5.9	
Zinc, Zn	110	72	51	68	76	40	62	65	36	39	25	39	27	22	11	39	28	39	35	49	30	45	34	23	29	19	16	28	50	26	96
Acenaphthene	< 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	< 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	< 0.5
Acenaphthylene	< 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	< 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	< 0.5
Anthracene	< 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	< 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	< 0.5
Benzo(a)anthracene	< 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	< 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	< 0.5
Benzo(a)pyrene	< 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	< 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	< 0.5
Carcinogenic PAHs, BaP TEQ <LOR=0	< 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	< 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	< 0.5
Carcinogenic PAHs, BaP TEQ <LOR=LOR	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Benzo(b&j)fluoranthene	< 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	< 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	< 0.5
Benzo(ghi)perylene	< 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	< 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	< 0.5
Benzo(k)fluoranthene	< 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	< 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	< 0.5
Chrysene	< 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	< 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	< 0.5
Dibenzo(ah)anthracene	< 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	< 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	< 0.5
Fluoranthene	< 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	< 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	< 0.5
Fluorene	< 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	< 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	< 0.5
Indeno(1,2,3-cd)pyrene	< 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	< 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	< 0.5
Naphthalene	< 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	< 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	< 0.5
Phenanthrene	< 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	< 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	< 0.5
Pyrene	< 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	< 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	< 0.5
Total PAH	< 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	< 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	< 0.5
TRH C10-C36 Total	< 20	< 20	< 20	22	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	120	< 20	170	
TRH C10-C14	< 50	165	142	179	197	183	< 50	133	< 50	132	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	70	134	< 50	< 50	< 50	< 50	159	< 50	< 50	2240	< 50	1440	
TRH C15-C28	< 50	67	62	77	98	83	< 50	68	< 50	52	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	71	< 50	< 50	< 50	< 50	85	< 50	< 50	1400	< 50	660	
TRH C29-C36	< 50	98	80	99	100	< 50	65	< 50	80	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	70	63	< 50	< 50	< 50	< 50	74	< 50	< 50	720	< 50	610	
TRH C6-C9	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 40	< 20	< 40
Naphthalene	< 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	< 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	< 1	< 0.5	< 1
TRH >C10-C16 (F2)	52	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	140	< 50	210
TRH >C10-C16 (F2) - Naphthalene	52	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	140	< 50	210
TRH C10-C40 Total (F bands)	110	< 100	130	110	130	160	150	< 100	110	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	110	< 100	< 100	< 100	< 100	< 100	120	< 100	2550	< 100	1690	
TRH >C16-C34 (F3)	110	< 100	130	110	130	160	150	< 100	110	< 100	< 100	< 100	< 100

Table LAR1
Western Sydney University – Milperra Campus, Bullecourt Avenue, Milperra, NSW 2214
Soil Results & Adopted Site Criteria
9996-ER-1-1

Group	Analyte	Units	PQL	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)					Management Limits for TPH Fractions F1 F4 in soil (mg/Kg) - NEPC 2013	ESLs and EILs NEPC 2013	Health Investigation Levels for Soil Contaminants - NEPM 2013	Data Set Minimum
				HSL - A Residential (Low Density)	HSL A & HSL B - Low - High density Residential				Soil Saturation Concentration (Csat)	Residential, Parkland and Public Open Space	Urban Residential and Public Open Space	Residential A	
					0 m to <1 m	1 m to <2 m	2 m to <4 m	4 m+		Fine Soil Texture	Fine Soil Texture		
Metals	Arsenic, As	mg/kg	2	-	-	-	-	-	-	-	100	100	2
	Cadmium, Cd	mg/kg	0.4	-	-	-	-	-	-	-	20	20	1
	Chromium, Cr	mg/kg	5.0	-	-	-	-	-	-	-	190	100	5
	Copper, Cu	mg/kg	5.0	-	-	-	-	-	-	-	150	6,000	5
	Lead, Pb	mg/kg	5	-	-	-	-	-	-	-	1100	300	6
	Mercury (inorganic)	mg/kg	0.10	-	-	-	-	-	-	-	-	40	0.1
	Nickel, Ni	mg/kg	5.0	-	-	-	-	-	-	-	30	400	5
	Zinc, Zn	mg/kg	5.0	-	-	-	-	-	-	-	320	7,400	6
PAH	Acenaphthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Acenaphthylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benz(a)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	0.7	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	3	0.6
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	1.2
	Benzo(b&j)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(ghi)perylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Dibenzo(ah)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluorene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	Phenanthrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Total PAH	mg/kg	0.5	-	-	-	-	-	-	-	-	300	< 0.5
TRH	TRH C10-C36 Total	mg/kg	50	-	-	-	-	-	-	-	-	-	22
	TRH C10-C14	mg/kg	20	-	-	-	-	-	-	-	-	-	55
	TRH C15-C28	mg/kg	50	-	-	-	-	-	-	-	-	-	50
	TRH C29-C36	mg/kg	50	-	-	-	-	-	-	-	-	-	51
	TRH C6-C9	mg/kg	20	-	-	-	-	-	-	-	-	-	< 20
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	TRH >C10-C16 (F2)	mg/kg	50	3,300	280	NL	NL	NL	560	1,000	120	-	52
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	50	-	-	-	-	-	-	-	-	-	52
	TRH C10-C40 Total (F bands)	mg/kg	100	-	-	-	-	-	-	-	-	-	110
	TRH >C16-C34 (F3)	mg/kg	100	4,500	-	-	-	-	-	3,500	1,300	-	110
	TRH >C34-C40 (F4)	mg/kg	100	6,300	-	-	-	-	-	10,000	5,600	-	100
	TRH C6-C10	mg/kg	20	4,400	-	-	-	-	-	-	-	-	< 20
	TRH C6-C10 minus BTEX (F1)	mg/kg	20	-	50	90	150	290	850	800	180	-	< 20
BTEX	Benzene	mg/kg	0.1	100	0.7	1	2	3	430	-	65	-	< 0.1
	Ethylbenzene	mg/kg	0.1	4,500	NL	NL	NL	NL	68	-	125	-	< 0.1
	m/p-xylene	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Toluene	mg/kg	0.1	14,000	480	NL	NL	NL	630	-	105	-	< 0.1
	Total Xylenes	mg/kg	0.3	12,000	110	310	NL	NL	330	-	45	-	< 0.3
OCP	4,4 - DDD	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDE	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDT	mg/kg	0.05	-	-	-	-	-	-	-	180	-	< 0.05
	a - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin + Dieldrin (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	b - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Chlordanes (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	50	< 0.1
	d - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	DDT + DDE + DDD (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	240	< 0.05
	Dieldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 1	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 2	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Endrin Aldehyde	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin Ketone	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Heptachlor	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	-	-	300	< 0.2
	Toxaphene	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 1
	Vic EPA IWRG 621 OCP 9total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Vic EPA IWRG 621 Other OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Alpha + Beta Endosulfan	mg/kg	0.05	-	-	-	-	-	-	-	-	270	0.00
OPP	Azinphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Bolstar	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorfenvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorpyrifos	mg/kg	0.2	-	-	-	-	-	-	-	-	160	< 0.2
	Chlorpyrifos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Coumaphos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Demeton-O	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Demeton-S	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Diazinon	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dichlorvos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dimethoate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Disulfoton	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	EPN	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethoprop	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenitrothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fensulfothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Malathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Merphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Methyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Mevinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Monocrotophos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Naled	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Omethoate	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Phorate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pyrazophos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ronnel	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Terbufos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tokuthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Trichloronate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
PCB	Aroclor-1016	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1221	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Aroclor-1232	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1242	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1248	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1254	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1260	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Total PCB*	mg/kg	0.1	-	-	-	-	-	-	-	-	1	< 0.5
Halogenated Phenols	2,4,5-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4,6-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2,6-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2-Chlorophenol	mg/kg	0.5									-	< 0.5
	4-Chloro-3-methylphenol	mg/kg	1.0									-	< 1
	Pentachlorophenol	mg/kg	1.0									100	< 1
	Tetrachlorophenols - Total	mg/kg	1.0									-	< 10
	Total Halogenated Phenol*	mg/kg	1.0									-	< 1
Non-Halogenated Phenols	2,4-Dimethylphenol	mg/kg	20.0									-	< 0.5
	2,4-Dinitrophenol	mg/kg	5.0									-	< 5
	2-Cyclohexyl-4,6-dinitrophenol	mg/kg	0.2									-	< 20
	2-Methyl-4,6-dinitrophenol	mg/kg	1.0									-	< 5
	2-Methylphenol (o-Cresol)	mg/kg	0.5									400	< 0.2
	2-Nitrophenol	mg/kg	5.0									-	< 1
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4									400	< 0.4
	4-Nitrophenol	mg/kg	5.0									-	< 5
	Dinoseb	mg/kg	20.0									-	< 20
	Phenol	mg/kg	0.5									3000	< 0.5
	Total Non-Halogenated Phenol*	mg/kg	20.0									-	< 20

Sample ID	BH65_0.0-0.1	BH66_0.0-0.1	BH66_0.3-0.5	BH66_1.0-1.2	BH67_0.0-0.05	BH68_0.0-0.1	BH69_0.05-0.2	BH71_0.0-0.2	BH72_0.0-0.2	BH73_0.0-0.2	BH74_0.0-0.2	BH75_0.0-0.2	BH76_0.0-0.2	BH77_0.0-0.2	BH78_0.0-0.2	BH79_0.0-0.2	BH80_0.0-0.2	BH81_0.2-0.4	BH82_0.05-0.2	BH83_0.05-0.2	BH84_0.05-0.2	TP85-0.0-0.2	TP85-1.7-1.9	TP85-2.5-2.7	BH86_0.0-0.2	BH87_0.0-0.2	BH88_0.0-0.2	BH89_0.0-0.2	BH90-0.0-0.1	BH91-0.0-0.1
Reference	S19-De29195	S19-De29196	S19-De29197	S19-De29198	S19-De29199	S19-De29200	S19-De29201	S19-De29202	S19-De29203	S19-De29204	S19-De29205	S19-De29206	S19-De29207	S19-De29208	S19-De29209	S19-De29210	S19-De29211	S19-De29212	S19-De29213	S19-De29214	S19-De29215	S20-Ja12918	S20-Ja12920	S20-Ja12921	S19-De29216	S19-De29217	S19-De29218	S19-De29219	S20-Ja40513	S20-Ja40515
Date Sampled	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019	18/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	16/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	17/12/2019	15/01/2020	15/01/2020	15/01/2020	18/12/2019	18/12/2019	18/12/2019	18/12/2019	8/01/2020	8/01/2020
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Metals	11	14	5.7	15	9.6	18	12	6	11	11	7	6.6
	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	21	21	26	27	10	9.7	20	15	16	19	21	18	20	16	13	14	20	15	32	28	41	21	28	27	13	12	15	15	11	6.6
	24	42	21	28	14	9	7.1	28	17	25	15	13	18	16	11	18	20	14	19	< 5	12	18	15	15	18	13	19	11	11	12
	28	45	59	31	14	12	15	65	41	22	71	45	47	33	24	55	72	18	14	12	11	29	23	16	28	25	37	27	14	10
	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	14	10	7.5	9.5	5.7	6.9	8.8	6.6	5.1	9.7	6.4	5.1	7.5	5.9	< 5	5.5	7	7.4	15	< 5	29	8.7	9.5	8.1	< 5	5.5	8.8	< 5	< 5	< 5
	72	83	140	58	47	34	13	110	70	70	46	31	40	31	25	42	53	25	19	< 5	25	38	29	23	56	57	120	40	40	30
PAH	< 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	< 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

Table LAR1
Western Sydney University – Milperra Campus, Bullecourt Avenue, Milperra, NSW 2214
Soil Results & Adopted Site Criteria
9996-ER-1-1

Group	Analyte	Units	PQL	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)					Management Limits for TPH Fractions F1 - F4 in soil (mg/Kg) - NEPC 2013	ESLs and EILs NEPC 2013	Health Investigation Levels for Soil Contaminants - NEPM 2013	Data Set Minimum
				HSL - A Residential (Low Density)	HSL A & HSL B - Low - High density Residential				Soil Saturation Concentration (Csat)	Residential, Parkland and Public Open Space	Urban Residential and Public Open Space	Residential A	
					0 m to <1 m	1 m to <2 m	2 m to <4 m	4 m+		Fine Soil Texture	Fine Soil Texture		
Metals	Arsenic, As	mg/kg	2	-	-	-	-	-	-	-	100	100	2
	Cadmium, Cd	mg/kg	0.4	-	-	-	-	-	-	-	20	20	1
	Chromium, Cr	mg/kg	5.0	-	-	-	-	-	-	-	190	100	5
	Copper, Cu	mg/kg	5.0	-	-	-	-	-	-	-	150	6,000	5
	Lead, Pb	mg/kg	5	-	-	-	-	-	-	-	1100	300	6
	Mercury (inorganic)	mg/kg	0.10	-	-	-	-	-	-	-	-	40	0.1
	Nickel, Ni	mg/kg	5.0	-	-	-	-	-	-	-	30	400	5
	Zinc, Zn	mg/kg	5.0	-	-	-	-	-	-	-	320	7,400	6
PAH	Acenaphthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Acenaphthylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(a)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	0.7	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	3	0.6
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	-	1.2
	Benzo(b&j)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(ghi)perylene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Dibenzo(ah)anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Fluorene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	Phenanthrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	< 0.5
	Total PAH	mg/kg	0.5	-	-	-	-	-	-	-	-	300	< 0.5
TRH	TRH C10-C36 Total	mg/kg	50	-	-	-	-	-	-	-	-	-	22
	TRH C10-C14	mg/kg	20	-	-	-	-	-	-	-	-	-	55
	TRH C15-C28	mg/kg	50	-	-	-	-	-	-	-	-	-	50
	TRH C29-C36	mg/kg	50	-	-	-	-	-	-	-	-	-	51
	TRH C6-C9	mg/kg	20	-	-	-	-	-	-	-	-	-	< 20
	Naphthalene	mg/kg	0.5	1,400	5	NL	NL	NL	10	-	170	-	< 0.5
	TRH >C10-C16 (F2)	mg/kg	50	3,300	280	NL	NL	NL	560	1,000	120	-	52
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	50	-	-	-	-	-	-	-	-	-	52
	TRH C10-C40 Total (F bands)	mg/kg	100	-	-	-	-	-	-	-	-	-	110
	TRH >C16-C34 (F3)	mg/kg	100	4,500	-	-	-	-	-	3,500	1,300	-	110
	TRH >C34-C40 (F4)	mg/kg	100	6,300	-	-	-	-	-	10,000	5,600	-	100
	TRH C6-C10	mg/kg	20	4,400	-	-	-	-	-	-	-	-	< 20
	TRH C6-C10 minus BTEX (F1)	mg/kg	20	-	50	90	150	290	850	800	180	-	< 20
BTEX	Benzene	mg/kg	0.1	100	0.7	1	2	3	430	-	65	-	< 0.1
	Ethylbenzene	mg/kg	0.1	4,500	NL	NL	NL	NL	68	-	125	-	< 0.1
	m/p-xylene	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Toluene	mg/kg	0.1	14,000	480	NL	NL	NL	630	-	105	-	< 0.1
	Total Xylenes	mg/kg	0.3	12,000	110	310	NL	NL	330	-	45	-	< 0.3
OCP	4,4 - DDD	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDE	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	4,4 - DDT	mg/kg	0.05	-	-	-	-	-	-	-	180	-	< 0.05
	a - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Aldrin + Dieldrin (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	b - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Chlordanes (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	50	< 0.1
	d - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	DDT + DDE + DDD (total)	mg/kg	0.05	-	-	-	-	-	-	-	-	240	< 0.05
	Dieldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 1	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan 2	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Endrin Aldehyde	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Endrin Ketone	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Heptachlor	mg/kg	0.05	-	-	-	-	-	-	-	-	6	< 0.05
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-	-	-	< 0.05
	Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-	-	-	10	< 0.05
	Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	-	-	300	< 0.2
	Toxaphene	mg/kg	1.0	-	-	-	-	-	-	-	-	-	< 1
	Vic EPA IWRG 621 OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Vic EPA IWRG 621 Other OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.2
	Alpha + Beta Endosulfan	mg/kg	0.05	-	-	-	-	-	-	-	-	270	0.00
OPP	Azinphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Bolstar	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorfenvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Chlorpyrifos	mg/kg	0.2	-	-	-	-	-	-	-	-	160	< 0.2
	Chlorpyrifos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Coumaphos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Demeton-O	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Demeton-S	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Diazinon	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dichlorvos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Dimethoate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Disulfoton	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	EPN	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethoprop	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ethyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenitrothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fensulfothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Fenthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Malathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Merphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Methyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Mevinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Monocrotophos	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Naled	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Omethoate	mg/kg	2	-	-	-	-	-	-	-	-	-	< 2
	Phorate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Pyrazophos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Ronnel	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Terbufos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Tokuthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
	Trichloronate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	< 0.2
PCB	Aroclor-1016	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1221	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.1
	Aroclor-1232	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1242	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1248	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1254	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Aroclor-1260	mg/kg	0.1	-	-	-	-	-	-	-	-	-	< 0.5
	Total PCB*	mg/kg	0.1	-	-	-	-	-	-	-	-	1	< 0.5
Halogenated Phenols	2,4,5-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4,6-Trichlorophenol	mg/kg	0.5									-	< 1
	2,4-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2,6-Dichlorophenol	mg/kg	1.0									-	< 0.5
	2-Chlorophenol	mg/kg	0.5									-	< 0.5
	4-Chloro-3-methylphenol	mg/kg	1.0									-	< 1
	Pentachlorophenol	mg/kg	1.0									100	< 1
	Tetrachlorophenols - Total	mg/kg	1.0									-	< 10
	Total Halogenated Phenol*	mg/kg	1.0									-	< 1
Non-Halogenated Phenols	2,4-Dimethylphenol	mg/kg	20.0									-	< 0.5
	2,4-Dinitrophenol	mg/kg	5.0									-	< 5
	2-Cyclohexyl-4,6-dinitrophenol	mg/kg	0.2									-	< 20
	2-Methyl-4,6-dinitrophenol	mg/kg	1.0									-	< 5
	2-Methylphenol (o-Cresol)	mg/kg	0.5									400	< 0.2
	2-Nitrophenol	mg/kg	5.0									-	< 1
	3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4									400	< 0.4
	4-Nitrophenol	mg/kg	5.0									-	< 5
	Dinoseb	mg/kg	20.0									-	< 20
	Phenol	mg/kg	0.5									3000	< 0.5
	Total Non-Halogenated Phenol*	mg/kg	20.0									-	< 20

Sample ID	BH92_0.0-0.2	BH93_0.0-0.2	BH94_0.0-0.2	BH95-0.0-0.2	BH96-0.0-0.1	BH97_0.0-0.2	BH98-0.0-0.2	BH99-0.0-0.2	BH99-0.2-0.4	BH100_0.2-0.4	BH101_0.0-0.2	TP101-0.0-0.2	TP101-0.8-1.0	TP101-1.3-1.5	BH102-0.0-0.2
Reference	S19-De29220	S19-De29221	S19-De29446	S20-Ja04517	S20-Ja04519	S19-De29222	S20-Ja04495	S20-Ja04496	S20-Ja04497	S19-De29223	S19-De29224	S20-Ja12922	S20-Ja12923	S20-Ja12924	S20-Ja04498
Date Sampled	18/12/2029	18/12/2029	18/12/2029	8/01/2020	8/01/2020	18/12/2019	9/01/2020	9/01/2020	9/01/2020	17/12/2019	18/12/2019	15/01/2020	15/01/2020	15/01/2020	9/01/2020
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
	19	8.5	7.3	6.2	4.7	5	< 2	3.1	2.5	14	14	11	7.4	8.5	5.5
	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	0.5	< 0.4	< 0.4	< 0.4	< 0.4
	18	7.7	9.1	< 5	11	7.3	< 5	7.2	6.9	17	20	18	16	21	9.2
	10	13	14	7.4	9.6	14	8.8	16	< 5	16	23	20	19	11	10
	13	21	18	9.7	15	19	11	61	< 5	16	62	44	25	18	15
	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
	< 5	< 5	< 5	< 5	6	< 5	< 5	7.6	< 5	< 5	9.2	7.2	7.9	< 5	< 5
	15	40	38	26	50	71	41	67	5.7	8.6	140	120	45	5.6	35
	< 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

Table LAR2
Bullecourt Road, Milperra, NSW
Groundwater Results Summary Table
9996-ER-1-1

Sample ID				MW01	MW02	MW03	MW04	MW05	MW08
Reference				S20-Ja04468	S20-Ja04469	S20-Ja04470	S20-Ja04471	S20-Ja04472	S20-Ja04473
Date Sampled				8/01/2020	8/01/2020	8/01/2020	8/01/2020	8/01/2020	8/01/2020
Sample Matrix				Water	Water	Water	Water	Water	Water
	NEPM (2013) - Table 1A(4)	**ANZECC & ARMCANZ (2000)**							
	Groundwater HSL's for Vapour Intrusion (SAND) - HSL D Commercial/Industrial 2m - <4m	**Fresh Waters**	**Marine Waters**						
	(mg/L)	**(mg/L)**	**(mg/L)**						
Metals/Metalloids									
Arsenic, As (V)	-	**0.013**	**-**	0.001	< 0.001	< 0.001	0.013	0.004	0.001
Cadmium, Cd	-	**0.0002**	**0.0007**	0.0017	0.0003	0.0005	< 0.0002	0.013	0.016
Chromium, Cr	-	**-**	**0.0270**	< 0.001	0.001	0.002	0.003	0.015	0.003
Copper, Cu	-	**0.0014**	**0.0013**	< 0.001	0.03	0.007	0.022	0.003	0.002
Lead, Pb	-	**0.0034**	**0.0044**	0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
Mercury (Total), Hg	-	**0.00006**	**0.0001**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel, Ni	-	**0.011**	**0.007**	0.03	0.012	0.067	0.062	0.21	0.34
Zinc, Zn	-	**0.008**	**0.015**	0.048	0.076	0.21	0.023	0.089	0.77
Alkali Metals									
Calcium	-			220	43	74	250	340	150
Magnesium	-			850	140	380	380	770	700
Potassium	-			26	4.2	14	53	53	32
Sodium	-			4800	1800	3200	3300	4900	4700
Alkalinity (speciated)									
Bicarbonate Alkalinity (as CaCO3)	-			430	< 20	23	1100	320	110
Carbonate Alkalinity (as CaCO3)	-			< 10	< 10	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	-			< 20	< 20	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	-			430	< 20	23	1100	320	110
Other Inorganics									
Ammonia as NH3	-	**0.9**	**0.91**	0.53	0.23	0.41	1.2	0.47	0.42
Chloride	-			10000	3200	6100	5400	10000	9600
Conductivity (at 25Â°C)	-			14000	4900	11000	9100	14000	23000
Nitrate (as N)	-			5.7	0.35	0.18	0.07	< 0.02	0.17
pH (at 25Â°C)				6.9	5.7	5.7	7.1	6.7	5.9
Sulphate (as SO4)	-			920	710	960	740	960	730
Total Dissolved Solids Dried at 180Â°C Â±	-			17000	5300	9900	10000	16000	17000
Monocyclic Aromatic Hydrocarbons									
Benzene	**5**	**1**	**0.5**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	**Not Limiting**	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	**Not Limiting**	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	**Not Limiting**	**0.35 (as o-xylene)**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes	**Not Limiting**	**0.2 (as p-xylene)**	**-**	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene	**Not Limiting**	**0.016**	**0.05**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzo[a]pyrene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total Recoverable Hydrocarbons									
TRH C10-36 (Total)	-	**-**	**-**	0.15	0.13	0.17	0.09	0.06	0.13
TRH C10-C14	-	**-**	**-**	0.35	0.33	0.17	0.29	< 0.1	0.13
TRH C15-C28	-	**-**	**-**	0.2	0.2	< 0.1	0.2	< 0.1	< 0.1
TRH C29-C36	-	**-**	**-**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TRH C6-C9	-	**-**	**-**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Naphthalene	-	**-**	**-**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
TRH >C10-C16	-	**-**	**-**	0.07	0.05	0.08	< 0.05	< 0.05	0.05
TRH >C10-C16 less Naphthalene (F2)	-	**-**	**-**	0.07	0.05	0.08	< 0.05	< 0.05	0.05
TRH >C10-C40 (total)*	-	**-**	**-**	0.27	0.25	< 0.1	0.2	< 0.1	< 0.1
TRH >C16-C34	-	**-**	**-**	0.2	0.2	< 0.1	0.2	< 0.1	< 0.1
TRH >C34-C40	-	**-**	**-**	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TRH C6-C10	-	**-**	**-**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)	-	**-**	**-**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Volatile Organic Compounds									
1.1.1.2-Tetrachloroethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	-	**0.16**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	-	**0.26**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	-	**0.06**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorotoluene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Allyl chloride	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	-	**-**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total MAH*	-	**-**	**-**	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
trans-1.2-Dichloroethene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 CHC (Total)*	-	**-**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	-	**-**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl chloride	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total	-	**-**	**-**	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Polychlorinated Biphenyls									
Aroclor-1016	-	**-**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1221	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Table LAR2
Bullecourt Road, Milperra, NSW
Groundwater Results Summary Table
9996-ER-1-1

Sample ID				MW01	MW02	MW03	MW04	MW05	MW08
Reference				S20-Ja04468	S20-Ja04469	S20-Ja04470	S20-Ja04471	S20-Ja04472	S20-Ja04473
Date Sampled				8/01/2020	8/01/2020	8/01/2020	8/01/2020	8/01/2020	8/01/2020
Sample Matrix				Water	Water	Water	Water	Water	Water
	NEPM (2013) - Table 1A(4)	**ANZECC & ARMCANZ (2000)**							
	Groundwater HSL's for Vapour Intrusion (SAND) - HSL D Commercial/Industrial 2m - <4m	**Fresh Waters**	**Marine Waters**						
	(mg/L)	**(mg/L)**	**(mg/L)**						
Aroclor-1232	-	**-**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1242	-	**0.003**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1248	-	**-**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1254	-	**0.0000001**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1260	-	**-**	**-**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Total PCB*	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Organochlorine Pesticides	**-**	**-**	**-**						
4.4'-DDD	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDE	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDT	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
a-BHC	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aldrin	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aldrin and Dieldrin (Total)*	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
b-BHC	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chlordanes - Total	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
d-BHC	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
DDT + DDE + DDD (Total)*	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dieldrin	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan I	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan II	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan sulphate	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin aldehyde	-	**-**	**-**	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin ketone	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
g-BHC (Lindane)	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor epoxide	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methoxychlor	-	**-**	**-**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toxaphene	-	**-**	**-**	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Vic EPA IWRG 621 OCP (Total)*	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	-	**-**	**-**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Organophosphorus Pesticides									
Azinphos-methyl	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos	-	**-**	**-**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos-methyl	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	-	**-**	**-**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-O	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Demeton-S	-	**-**	**-**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Diazinon	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
EPN	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Ethoprop	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Naled	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Phorate	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	-	**-**	**-**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	-	**-**	**-**	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Table LAR3
Western Sydney University – Milperra Campus, Bullecourt Avenue, Milperra, N
Relative Percent Difference
9996-ER-1-1

			Sample ID	BH01_0.0-0.2	DUP_01		BH01_0.0-0.2	DUP-1A		BH31_0.0-0.2
			Reference	S19-De29140	S19-De29225		S19-De29140	ES1942492001		S19-De29174
			Date Sampled	16/12/2019	16/12/2019		16/12/2019	16/12/2019		16/12/2019
			Sample Matrix	Soil	Soil		Soil	Soil		Soil
Group	Analyte	Units	LOR			RPD (%)			RPD (%)	
Metals	Arsenic	mg/kg	2	6.3	16	87	6.3	23	114	4.8
	Cadmium	mg/kg	0.4	< 0.4	< 0.4	N/A	< 0.4	<1	N/A	< 0.4
	Chromium	mg/kg	5.0	17	34	67	17	36	72	9.8
	Copper	mg/kg	5.0	14	15	7	14	9	43	8.6
	Lead	mg/kg	5	16	29	58	16	21	27	18
	Mercury	mg/kg	0.1	< 0.1	< 0.1	N/A	< 0.1	<0.1	N/A	< 0.1
	Nickel	mg/kg	5	6.3	11	54	6.3	5	23	< 5
	Zinc	mg/kg	5	43	56	26	43	58	30	27
PAH	Acenaphthene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Acenaphthylene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Anthracene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Benzo(a)anthracene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.5	0.6	0.6	0	0.6	0.6	0	0.6
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.5	1.2	1.2	0	1.2	1.2	0	1.2
	Benzo(b&j)fluoranthene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Benzo(ghi)perylene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Chrysene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Dibenzo(ah)anthracene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Fluoranthene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Fluorene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Naphthalene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Phenanthrene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Pyrene	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5
	Total PAH (18)	mg/kg	0.5	< 0.5	< 0.5	N/A	< 0.5	<0.5	N/A	< 0.5

RPD exceeding criteria

N/A Primary, Duplicate or Triplicate less than LOR and/or not analysed

DUP_02		BH31_0.0-0.2	DUP-2A		BH07_0.0-0.2	DUP_03		BH07_0.0-0.2	DUP-3A		BH08_0.0-0.2	DUP_04		BH08_0.0-0.2
S19-De29226		S19-De29174	ES1942492002		S19-De29152	S19-De29227		S19-De29152	ES1942492003		S19-De29154	S19-De29228		S19-De29154
16/12/2019		16/12/2019	16/12/2019		17/12/2019	17/12/2019		17/12/2019	17/12/2019		18/12/2019	18/12/2019		18/12/2019
Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil
	RPD (%)			RPD (%)			RPD (%)			RPD (%)			RPD (%)	
8.5	56	4.8	9	61	11	19	53	11	11	0	3	3.8	24	3
< 0.4	N/A	< 0.4	<1	N/A	< 0.4	< 0.4	N/A	< 0.4	<1	N/A	< 0.4	< 0.4	N/A	< 0.4
15	42	9.8	25	87	20	24	18	20	19	5	6.4	7.9	21	6.4
13	41	8.6	11	24	16	21	27	16	15	6	23	25	8	23
28	43	18	27	40	25	36	36	25	28	11	31	36	15	31
< 0.1	N/A	< 0.1	<0.1	N/A	< 0.1	< 0.1	N/A	< 0.1	<0.1	N/A	< 0.1	< 0.1	N/A	< 0.1
< 5	N/A	< 5	5	N/A	12	16	29	12	12	0	< 5	< 5	N/A	< 5
43	46	27	44	48	32	40	22	32	34	6	91	93	2	91
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6
1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5

DUP-4A		BH54-0.0-0.2	DUP-05		DUP-05	DUP-5A		BH98-0.0-0.2	DUP-06		BH98-0.0-0.2	DUP-6A		TP09-0.0-0.2
ES1942492004		S20-Ja04493	S20-Ja04499		S20-Ja04499	ES2000668001		S20-Ja04495	S20-Ja04500		S20-Ja04495	ES2000668002		S20-Ja12898
18/12/2019		9/01/2020	9/01/2020		9/01/2020	9/01/2020		9/01/2020	9/01/2020		9/01/2020	9/01/2020		15/01/2020
Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil
	RPD (%)			RPD (%)			RPD (%)			RPD (%)			RPD (%)	
<5	N/A	2.50	2.7	8	2.7	<5	N/A	< 2	< 2	N/A	< 2	<5	N/A	12
<1	N/A	< 0.4	< 0.4	N/A	< 0.4	<1	N/A	< 0.4	< 0.4	N/A	< 0.4	<1	N/A	< 0.4
6	6	6.80	7.2	6	7.2	7	3	< 5	< 5	N/A	< 5	8	N/A	16
23	0	11.00	13	17	13	12	8	8.8	8.9	1	8.8	12	31	20
26	18	8.40	9	7	9	10	11	11	13	17	11	18	48	25
<0.1	N/A	< 0.1	< 0.1	N/A	< 0.1	<0.1	N/A	< 0.1	< 0.1	N/A	< 0.1	<0.1	N/A	< 0.1
4	N/A	< 5	< 5	N/A	< 5	4	N/A	< 5	< 5	N/A	< 5	3	N/A	7.7
86	6	39.00	40	3	40	42	5	41	39	5	41	51	22	51
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
0.6	0	0.60	0.60	0	0.60	0.6	0	0.60	0.60	0	0.60	0.6	0	0.6
1.2	0	1.20	1.20	0	1.20	1.2	0	1.20	1.20	0	1.20	1.2	0	1.2
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5

DUP-07		TP09-0.0-0.2	DUP-7A		TP16-0.0-0.2	DUP-08		TP16-0.0-0.2	DUP-8A		TP12-0.0-0.2	DUP-09		TP12-0.0-0.2
S20-Ja12925		S20-Ja12898	ES2001581001		S20-Ja12938	S20-Ja12926		S20-Ja12938	ES2001581002		S20-Ja12935	S20-Ja12927		S20-Ja12935
15/01/2020		15/01/2020	15/01/2020		15/01/2020	15/01/2020		15/01/2020	15/01/2020		15/01/2020	15/01/2020		15/01/2020
Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil
	RPD (%)			RPD (%)			RPD (%)			RPD (%)			RPD (%)	
16	29	12	9.7	21	5.4	6.7	21	5.4	6.7	21	8.4	5.4	43	8.4
< 0.4	N/A	< 0.4	<0.1	N/A	< 0.4	< 0.4	N/A	< 0.4	0.1	N/A	< 0.4	< 0.4	N/A	< 0.4
29	58	16	15.2	5	9	8.5	6	9	7.7	16	18	11	48	18
40	67	20	19	5	22	27	20	22	22.1	0	26	32	21	26
26	4	25	23	8	19	23	19	19	19.7	4	30	35	15	30
< 0.1	N/A	< 0.1	<0.1	N/A	< 0.1	< 0.1	N/A	< 0.1	<0.1	N/A	< 0.1	< 0.1	N/A	< 0.1
6.2	22	7.7	4.7	48	17	24	34	17	16	6	8.8	38	125	8.8
55	8	51	43.7	15	79	99	22	79	78.8	0	79	99	22	79
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6
1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5

DUP-9A		BH97_0.0-0.2	DUP_14		BH97_0.0-0.2	DUP-14A		MW01	DUP-01		MW01	Dup-1A	
ES2001581003		S19-De29222	S19-De29229		S19-De29222	ES1942492009		S20-Ja04468	S20-Ja04474		S20-Ja04468	ES2000668003	
15/01/2020		18/12/2019	18/12/2019		18/12/2019	18/12/2019		8/01/2020	8/01/2020		8/01/2020	8/01/2020	
Soil		Soil	Soil		Soil	Soil		Groundwater	Groundwater		Groundwater	Groundwater	
	RPD (%)			RPD (%)			RPD (%)			RPD (%)			RPD (%)
6.2	30	5	5.4	8	5	<5	N/A	0.001	0.001	0	0.001	0.001	0
<0.1	N/A	< 0.4	< 0.4	N/A	< 0.4	<1	N/A	0.0017	0.0017	0	0.0017	0.0017	0
13.7	27	7.3	8	9	7.3	5	37	< 0.001	< 0.001	N/A	< 0.001	0.001	N/A
26.7	3	14	12	15	14	11	24	< 0.001	< 0.001	N/A	< 0.001	0.003	N/A
20.7	37	19	22	15	19	15	24	0.001	0.001	0	0.001	0.001	0
<0.1	N/A	< 0.1	< 0.1	N/A	< 0.1	<0.1	N/A	< 0.0001	< 0.0001	N/A	< 0.0001	<0.0001	N/A
14.7	50	< 5	< 5	N/A	< 5	3	N/A	0.022	0.019	15	0.022	0.03	31
75.4	5	71	70	1	71	74	4	0.048	0.043	11	0.048	0.069	36
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
0.6	0	0.6	0.6	0	0.6	0.6	0	-	-	N/A	-	-	N/A
1.2	0	1.2	1.2	0	1.2	1.2	0	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A
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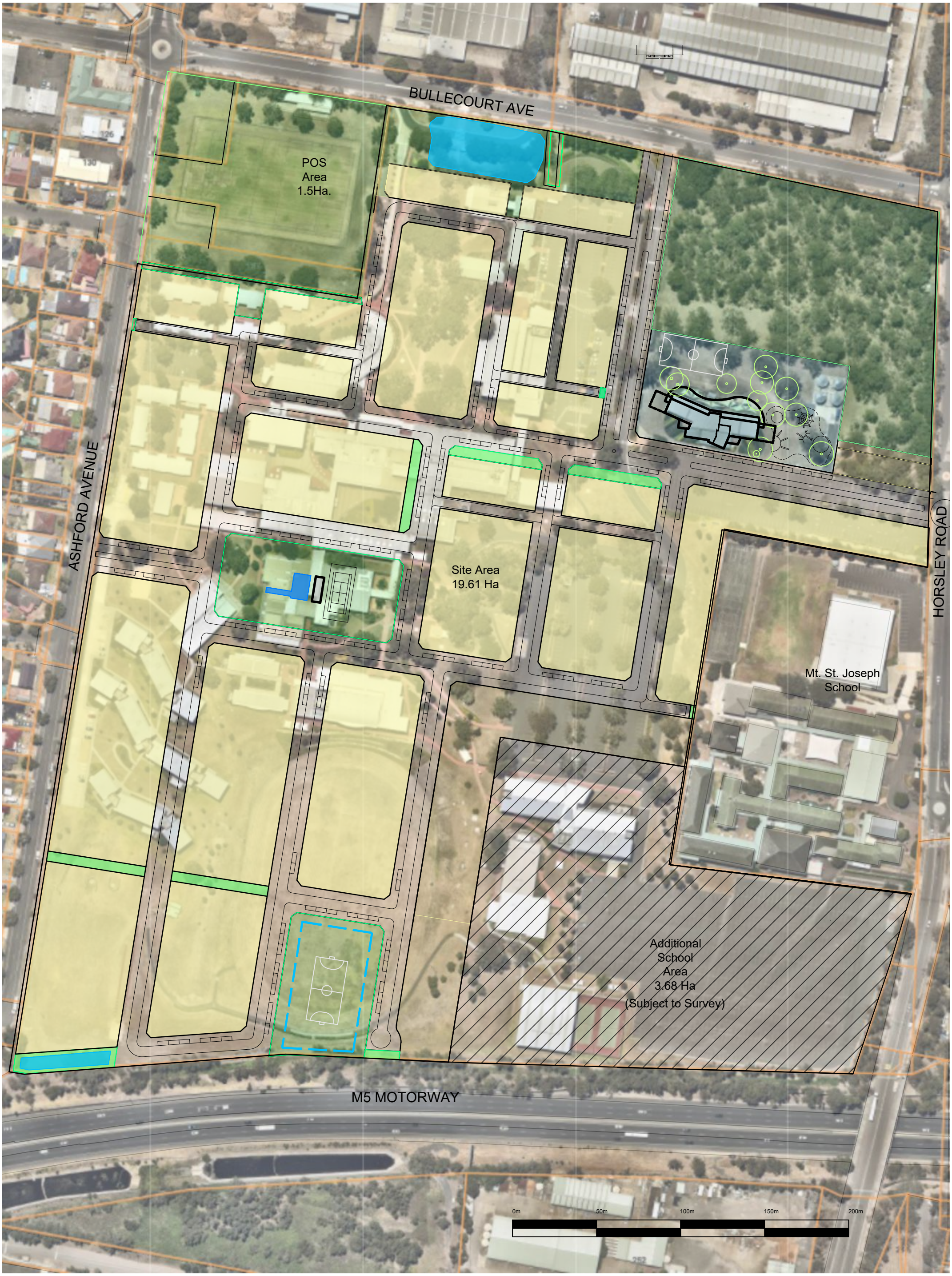
< 0.5	N/A	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	-	-	N/A	-	-	N/A

APPENDIX A

SITE DEVELOPMENT PLANS

DRAFT

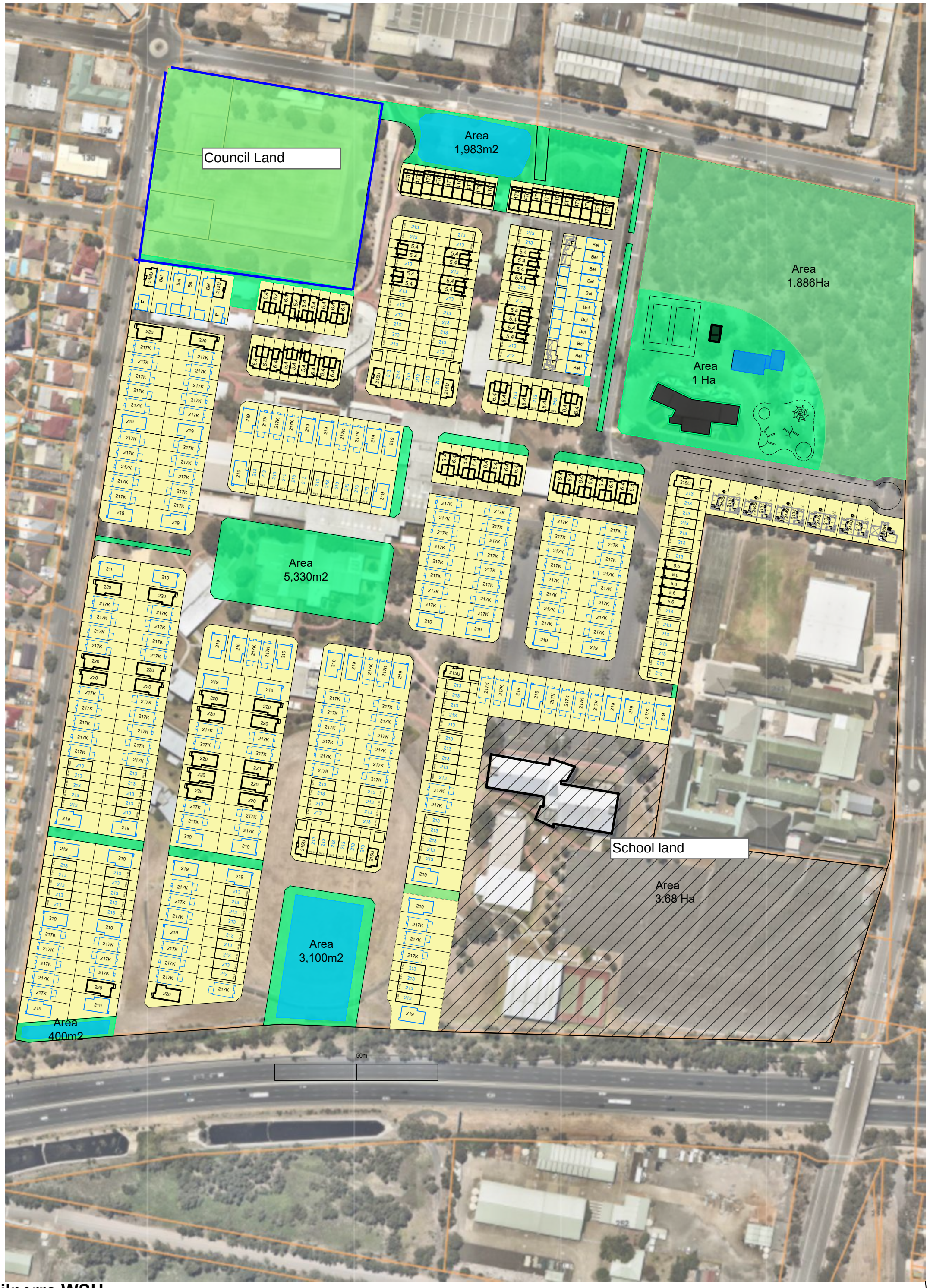


MILPERRA WSU

Current Masterplan

22.10.19

MIRVAC DESIGN



Milperra WSU

Layout- Option 1h8b

21.06.19

APPENDIX B

SITE SURVEY

DRAFT

BULLECOURT AVE
Bus Bay
Hockey Club
DP 91953
SINAI AVE
Student Residence
DP 547674
FIRST AVENUE
IAN SMITH AVENUE
MERRIS PL
LILLE PL
MESSINES AVE
ASHFORD AVE
Student Residence
DERNANCOURT PDE
THIRD AVENUE
HORSLEY RD
ZONNEBEKE AVE
Volleyball Court
HAMEL CL
SOMME CR
Javelin, Hammer & Shot put fields
Storage Containers
Cricket Oval Football Field Running Track
Long Jump Fields
Covered Courts
Tennis Courts
Mt St Joseph Catholic School
FLANDERS AVE
SOUTH WESTERN MOTORWAY
DP 231721
DP 236028
DP 237192
DP 237191
DP 230101
DP 239008
DP 232889
DP 232608
DP 228751
DP 230022
DP 229631
DP 229888
DP 603074
DP 238384
DP 752013
SP 67073
DP 533380
DP 752013
DP 1093355
DP 1027307
DP 514918
DP 516522
DP 1096110
DP 526235
DP 228751
DP 225714
DP 512619
DP 1092293
DP 327986
DP 73
SP 64626
DP 16010
DP 132496
DP 554515
DP 16010
DP 16010
SP 62916
DP 16010
DP 732013
DP 221860
50 100 200

APPENDIX C

BOREHOLE AND TEST PIT LOGS

DRAFT

APPENDIX D

PID CALIBRATION CERTIFICATION

DRAFT

PID Calibration Certificate

Instrument PhoCheck Tiger
Serial No. T-105429

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:	Flowrate					

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		92ppm Isobutylene	NATA	SY245		91.8ppm

Calibrated by: **Sen Phiilp**

Calibration date: **12/12/2019**

Next calibration due: **9/06/2020**

Calibration & Service Report
PID

Company:	Active Environmental Solutions Hire	**Manufacturer:**	RAE Systems	**Serial #:**	592-905200
Contact:	William Pak/Milenko Sisic	**Instrument:**	MiniRAE 3000	**Hire #:**	891
Address:	Unit 16, 191 Parramatta Road	**Model:**	PGM 7320	**Client:**	Sam Scully
	AUBURN NSW 2144	**Configuration:**	PID (10.6eV)	**Company:**	Alliance Geotech
Phone:	02 9716 5966 | **Fax**: 02 9716 5988	**Wireless:**	-	**Project #:**	9996
Email:	hire@aesolutions.com.au	**Network ID:**	-	**Notes:**	

Item	Test	Pass/Fail	Comments
Battery	Li Ion	✓	
Charger	Charger, Power supply	✓	
	Cradle	✓	
Pump	Flow	✓	>500 mL/min
Filter	Filter, fitting, etc	✓	
Alarms	Audible, visual, vibration	✓	
Display	Operation	✓	
PCB	Operation	✓	
Connectors	Condition	✓	
Firmware	Version	✓	2.16
Datalogger	Operation	✓	
Monitor Housing	Condition	✓	
Case	Condition/Type	✓	
Sensors			
PID	Lamp	✓	
PID	Sensor	✓	
THP	Sensor	✓	

Engineer's Report

Setup, service and calibration for hire

Calibration Certificate

Sensor	Type	Serial No:	Span Gas	Concentration	Traceability Lot #	CF	Reading	
							Zero	Span
Oxygen								
LEL								
PID	10.6eV	-	Isobutylene	100ppm	A0442963	1.00	0	100ppm
Toxic 1								
Toxic 2								
Toxic 3								
Toxic 4								
Toxic 5								

Calibrated/Repaired by: William Pak

Date: 06.01.2020

Next due: 06.07.2020

APPENDIX E

GROUNDWATER WELL SURVEY

DRAFT

12d Project - c:\12dS\data\Affinity\Projects_5\02 - Royal Randwick Hospital - Diona\02.1 Controlled 12d Projects\SERVICES EXISTING.12dmodel\SERVICES EXISTING

THIS SHEET MAY BE PREPARED USING COLOUR AND MAY BE INCOMPLETE IF COPIED
DRAWING FILE LOCATION \ NAME
C:\Users\Affinity Survey\Desktop\Kevin O Gorman Personal\New Jobs Details\Milperra Western Sydney Campus\Western Sydney University Monitoring Wells111

A3 ORIGINAL 100 mm ON ORIGINAL
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

PLOT DATE
Mon Jan 20 17:49:09 2020

REV	DATE	NOTES	WVR No	APPROVAL

TITLE	NAME
DRAFTER	Affinity Survey
DRAFTING CHECK	
DESIGNER	
DESIGN CHECK	
DESIGN MANAGER	
PROJECT MANAGER	

AFFINITY SURVEY

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING

CLIENT

Alliance Geotechnical
ENGINEERING | ENVIRONMENTAL | TESTING

SCALE at A3 1:1000

N

CO-ORDINATE SYSTEM: MGA ZONE 56

HEIGHT DATUM: A.H.D.

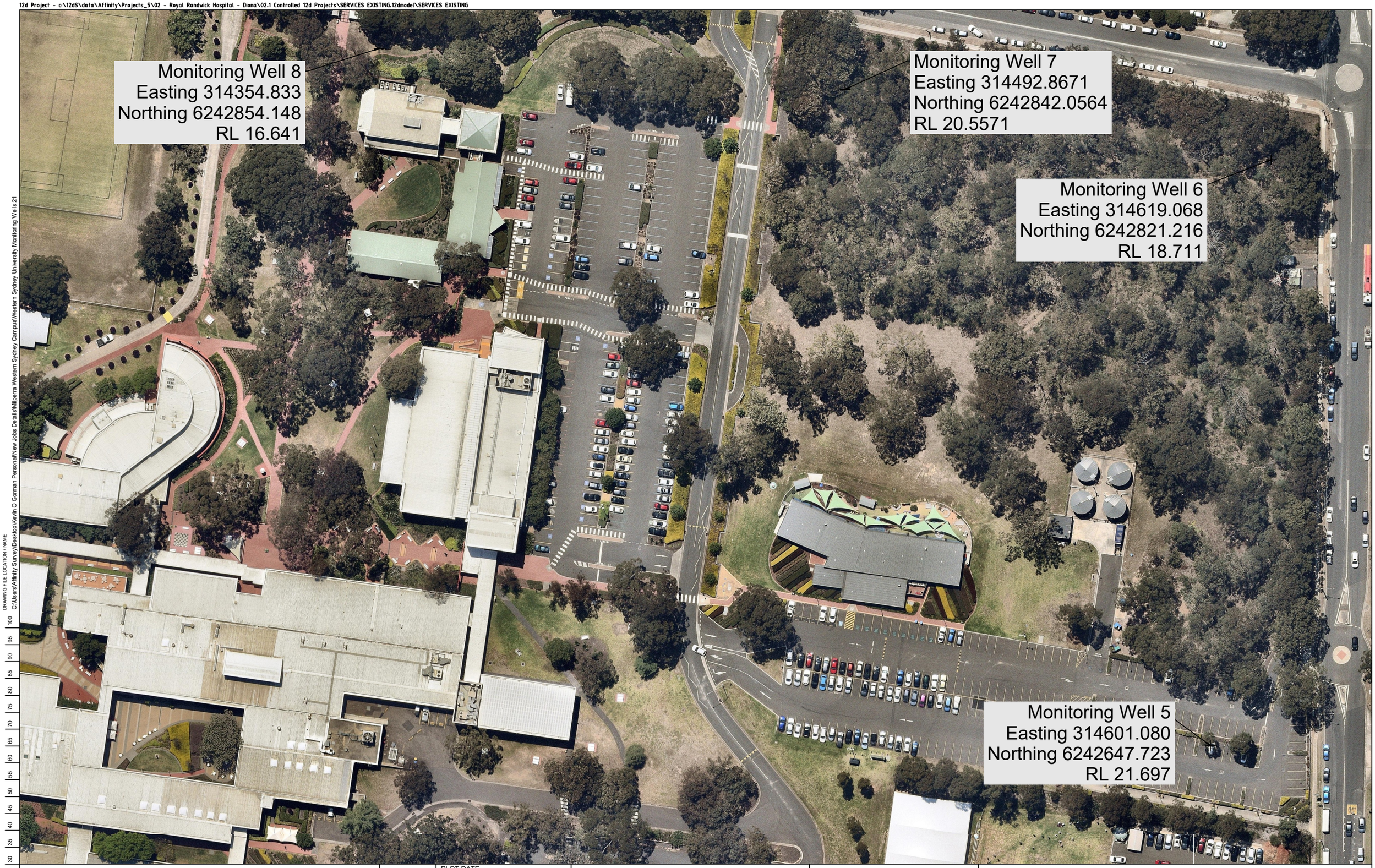
Western Sydney University Campus, Milperra

Location And Level Monitoring Wells

PLOT DATE = Mon Jan 20 17:49:09 2020

CLIENT PROJECT / DRAWING No	ISSUE STATUS	AS PROJECT / DRAWING No	ISSUE

12d Project - c:\12dS\data\Affinity\Projects_5\02 - Royal Randwick Hospital - Diona\02.1 Controlled 12d Projects\SERVICES EXISTING.12dmodel\SERVICES EXISTING



THIS SHEET MAY BE PREPARED USING COLOUR AND MAY BE INCOMPLETE IF COPIED
DRAWING FILE LOCATION \ NAME
C:\Users\Affinity Survey\Desktop\Kevin O Gorman Personal\New Jobs Details\Milperra Western Sydney Campus\Western Sydney University Monitoring Wells 21

A3 ORIGINAL 100 mm ON ORIGINAL

PLOT DATE
Mon Jan 20 18:03:18 2020

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING

SCALE at A3 1:1000

Western Sydney University Campus, Milperra

REV	DATE	NOTES	WVR No	APPROVAL

TITLE	NAME
DRAFTER	Affinity Survey
DRAFTING CHECK	
DESIGNER	
DESIGN CHECK	
DESIGN MANAGER	
PROJECT MANAGER	

AFFINITY SURVEY

CLIENT

Alliance Geotechnical
ENGINEERING | ENVIRONMENTAL | TESTING

N

Location And Level
Monitoring Wells

CO-ORDINATE SYSTEM: MGA ZONE 56 | HEIGHT DATUM: A.H.D.

CLIENT PROJECT / DRAWING No	ISSUE STATUS	AS PROJECT / DRAWING No	ISSUE
		PLOT DATE - Mon Jan 20 18:03:18 2020	

APPENDIX F

GROUNDWATER SAMPLING CALIBRATION DOCUMENTATION

DRAFT

Calibration & Service Report
Water Quality Meter

Company:	Active Environmental Solutions Hire	**Manufacturer:**	YSI	**Hire Contract:**	891
Address:	Unit 16, 191 Parramatta Road AUBURN NSW 2144	**Instrument/Model:**	Professional Plus	**Client:**	Alliance Geotech
		Cable:	1m Quatro Cable	**Contact:**	Sam Scully
Phone:	02 9716 5966 | **Fax**: 02 9716 5988	**Serial #:**	18K100443	**Project #:**	9996
Email:	hire@aesoultions.com.au	**Notes:**		**Notes:**	

Item	Test	Pass	Comments
Battery	2 x Alkaline C-cells	✓	Voltage reading above 2.9V
	Battery Saver	✓	Automatically turns off after 60 minutes if not used
Connections	Condition	✓	Good, clean
Cable	Condition	✓	Clean, no tears
Display	Operation	✓	
Firmware	Version	✓	4.0.0
Keypad	Operational	✓	
Display	Screen	✓	
Unit	Condition, seals and O-rings	✓	
Monitor housing	Condition	✓	
pH			
Condition		✓	New probe fitted
pH millivolts for pH7 calibration range 0 mV ± 50 mV		✓	
pH 4 mV range + 165 to + 180 from 7 buffer mV value		✓	
pH slope		✓	55 to 60 mV/pH; ideal 59mV
Response time < 90 seconds		✓	
Calibrated and conforms to manufacturer's specifications		✓	
ORP			
Condition		✓	New probe fitted
Response time < 90 seconds		✓	
within ± 80mv of reference Zobell Reading		✓	
Calibrated and conforms to manufacturer's specifications		✓	Variance range ± 20mV
Conductivity			
Condition		✓	Good, Clean.
Temperature		✓	°C
Conductivity cell constant 5.0 ± 1.0 in GLP file		✓	
Clean sensor reads less than 3 uS/cm in dry air		✓	
Calibrated and conforms to manufacturer's specifications		✓	µs/cm
Dissolved Oxygen			
Condition		✓	New probe fitted
DO sensor in use		✓	Polarographic
1.25 mil PE membrane (yellow membrane):		✓	
DO Sensor Value		✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA
Calibrated and conforms to manufacturer's specifications		✓	ppm

				Instrument Readings		
Parameter	**Standards**	**Reference**	**Calibration Point**	**Before**	**After**	**Units**
Temperature	Center 370 Thermometer	Room Temp.	23.6	N/A	23.6	°C
pH	pH 4.00	328104	4.01	4.00	4.01	pH
pH	pH 7.00	329744	7.00	6.97	7.00	pH
Conductivity	2760 µs/cm at 25°C	332208	2760	2848	2760	µs/cm
ORP (Ref. check only)	Zobell A & B	326918 & 326693	235.3	233.1	235.3	mV
Zero Dissolved Oxygen	NaSO3 in distilled water	283762	0.0	2.4	0.0	%
100% Dissolved Oxygen	100% Air Saturation	Fresh Air	100.0	92.7	100.0	%

Calibrated By: William Pak

Calibration Date: 06/01/2020 **Calibration Due:** 06/07/2020

Calibration & Service Report
Peristaltic Pump

Company:	Active Environmental Solutions Hire	**Manufacturer:**	Geotech	**Serial #:**	4449
Address:	Unit 16, 191 Parramatta Road AUBURN NSW 2144	**Instrument/Model:**	51350021	**Cable Length:**	4.5m
Phone:	02 9716 5966 | **Fax**: 02 9716 5988	**Client Company:**	Alliance Geotech	**Client Email:**	
Email:	hire@aesoultions.com.au	**Client Name:**	Sam Scully	**Client Phone:**	

Equipment Check

Geopump Peristaltic Pump

Customer:	Alliance Geotech	**Manufacturer:**	Geotech
Contact:	Sam Scully	**Instrument:**	Peristaltic Pump
Order:	9996	**Serial #:**	4449
		Head Serial #:	
		Cable length:	4.5m

Item	Test	Pass	Comments
Battery	12 Voltage	✓	Voltage above 13 V
	Fuses	✓	
	Capacity	✓	
Pump	Decontaminated	✓	
	Condition	✓	
	Operation	✓	
	0.5 m Silicon Tubing	✓	New Tubing
Charger	Condition	✓	
Hard Case	Condition	✓	
Instrument Test	Operation checked	✓	
Instruction manual	Included	✓	

Comments

2 batteries sent.

This is to certify that the above instrument has been checked and is in good working order.

Checked By: Jerry Ji

Check Date: 06/01/2020 **Due for Check:** 06/07/2020

APPENDIX G

LABORATORY DOCUMENTATION

DRAFT

Helen Simpson

From: Sam Scully <sam@allgeo.com.au>
Sent: Tuesday, 21 January 2020 12:11 PM
To: Helen Simpson
Subject: [EXTERNAL] - RE: ALS Workorder ES2001581, Client ALLGEOT, Project 9996

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hi Helen,

Standard 8 metals suite (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc). By trace metals we mean if they could please be analysed using a lower LOR.

Please do not hesitate to contact me if you have any queries or questions,

Kind Regards,

Sam Scully

Environmental Consultant - 0400 339 745 | **Email:** sam@allgeo.com.au

Alliance Geotechnical
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Your On-Site Geotechnical & Environmental Specialists

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Office Email: admin@allgeo.com.au - **Website:** allgeo.com.au - **Office Phone:** 1800 288 188
PO Box 275, Seven Hills NSW 1730 / Address: 10 Welder Road, Seven Hills NSW 2147

Our office administration will be closed from December 23rd and will reopen on January 6th
For any urgent or unexpected geotechnical or environmental enquiries, please phone 1800 288 188
WISHING EVERYONE HAPPY HOLIDAYS FROM THE ALLIANCE GEOTECHNICAL TEAM!

Environmental Division
Sydney
Work Order Reference
ES2001581

Telephone : +61-2-8784 8555

From: Helen Simpson <helen.simpson@alsglobal.com>
Sent: Tuesday, 21 January 2020 11:54 AM
To: Sam Scully <sam@allgeo.com.au>
Subject: ALS Workorder ES2001581, Client ALLGEOT, Project 9996

Hi Sam,

For the attached COC, the 2 soils have been logged for PAH, but we do require further clarification on which "trace metals" are required for these samples.

Kind Regards,

Helen Simpson
Sample Admin, Environmental
Sydney

T +61 2 8784 8555
F +61 2 8784 8500
helen.simpson@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

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EnviroMail™ 128 – Revised PFAS Bottle Requirements

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ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2001581**	Page	: 1 of 4
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Telephone	: +61-2-8784 8555
Project	: 9996	Date Samples Received	: 17-Jan-2020
Site	: ----	Issue Date	: 23-Jan-2020
Sampler	: SAM SCULLY	No. of samples received	: 3
Order number	: ----	No. of samples analysed	: 3

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Total Mercury by FIMS	1	15	6.67	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / ***Container*** / Client Sample ID(s)	***Sample Date***	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	***Date analysed***	*Due for analysis*	*Evaluation*
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
DUP-7A, DUP-8A, DUP-9A	**15-Jan-2020**	**----**	----	----	**20-Jan-2020**	29-Jan-2020	✓
EG020T: Total Metals by ICP-MS							
Soil Glass Jar - Unpreserved (EG020X-T)							
DUP-7A, DUP-8A, DUP-9A	**15-Jan-2020**	**22-Jan-2020**	13-Jul-2020	✓	**22-Jan-2020**	13-Jul-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
DUP-7A, DUP-8A, DUP-9A	**15-Jan-2020**	**22-Jan-2020**	12-Feb-2020	✓	**22-Jan-2020**	12-Feb-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
DUP-7A, DUP-8A, DUP-9A	**15-Jan-2020**	**21-Jan-2020**	29-Jan-2020	✓	**22-Jan-2020**	01-Mar-2020	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	**6.67**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite X	EG020X-T	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite Y	EG020Y-T	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite X	EG020X-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite Y	EG020Y-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite X	EG020X-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite Y	EG020Y-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite X	EG020X-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite Y	EG020Y-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Total Metals by ICP-MS - Suite X	EG020X-T	SOIL	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite Y	EG020Y-T	SOIL	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

QUALITY CONTROL REPORT

Work Order	: **ES2001581**	Page	: 1 of 5
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Contact	: Customer Services ES
Address	: 10 Welder Road, Seven Hills, NSW	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 9996	Date Samples Received	: 17-Jan-2020
Order number	: ----	Date Analysis Commenced	: 20-Jan-2020
C-O-C number	: ----	Issue Date	: 23-Jan-2020
Sampler	: SAM SCULLY		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Gaston Allende	R&D Chemist	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2818847)									
ES2001325-001	Anonymous	EA055: Moisture Content	----	0.1	%	89.9	90.4	0.590	0% - 20%
ES2001577-002	Anonymous	EA055: Moisture Content	----	0.1	%	14.9	15.1	1.37	0% - 20%
EG020T: Total Metals by ICP-MS (QC Lot: 2821949)									
ES2001581-001	DUP-7A	EG020Y-T: Cadmium	7440-43-9	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 2821950)									
ES2001581-001	DUP-7A	EG020X-T: Arsenic	7440-38-2	0.1	mg/kg	9.7	9.0	7.20	0% - 20%
		EG020X-T: Chromium	7440-47-3	0.1	mg/kg	15.2	12.5	19.2	0% - 20%
		EG020X-T: Copper	7440-50-8	0.1	mg/kg	19.0	16.0	17.4	0% - 20%
		EG020X-T: Nickel	7440-02-0	0.1	mg/kg	4.7	5.1	6.99	0% - 20%
		EG020X-T: Lead	7439-92-1	0.1	mg/kg	23.0	20.6	10.9	0% - 20%
		EG020X-T: Zinc	7440-66-6	0.5	mg/kg	43.7	50.5	14.5	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2821947)									
ES2001588-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2819097)									
ES2001441-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2819097) - continued									
ES2001441-001	Anonymous	EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2821949)								
EG020Y-T: Cadmium	7440-43-9	0.1	mg/kg	<0.1	4.64 mg/kg	101	86.0	130
EG020T: Total Metals by ICP-MS (QCLot: 2821950)								
EG020X-T: Arsenic	7440-38-2	0.1	mg/kg	<0.1	21.7 mg/kg	106	90.0	130
EG020X-T: Chromium	7440-47-3	0.1	mg/kg	<0.1	43.9 mg/kg	96.0	72.0	124
EG020X-T: Copper	7440-50-8	0.1	mg/kg	<0.1	32 mg/kg	111	76.0	132
EG020X-T: Nickel	7440-02-0	0.1	mg/kg	<0.1	55 mg/kg	110	73.0	135
EG020X-T: Lead	7439-92-1	0.1	mg/kg	<0.1	40 mg/kg	107	73.0	128
EG020X-T: Zinc	7440-66-6	0.5	mg/kg	<0.5	60.8 mg/kg	111	83.0	138
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2821947)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	86.3	70.0	105
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2819097)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	94.3	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	96.0	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	95.0	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	95.8	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	95.1	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	96.1	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	99.0	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	96.6	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	96.8	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	94.3	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	96.4	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	95.2	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	94.4	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	91.9	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	94.9	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	95.7	63.0	121

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Matrix Spike (MS) Report

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG020T: Total Metals by ICP-MS (QCLot: 2821949)							
ES2001581-001	DUP-7A	EG020Y-T: Cadmium	7440-43-9	50 mg/kg	119	70.0	130
EG020T: Total Metals by ICP-MS (QCLot: 2821950)							
ES2001581-001	DUP-7A	EG020X-T: Arsenic	7440-38-2	50 mg/kg	121	70.0	130
		EG020X-T: Chromium	7440-47-3	50 mg/kg	122	70.0	130
		EG020X-T: Copper	7440-50-8	250 mg/kg	129	70.0	130
		EG020X-T: Nickel	7440-02-0	50 mg/kg	129	70.0	130
		EG020X-T: Lead	7439-92-1	250 mg/kg	116	70.0	130
		EG020X-T: Zinc	7440-66-6	250 mg/kg	127	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2821947)							
ES2001326-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	87.8	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2819097)							
ES2001458-016	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	94.9	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	96.3	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2001581**	Page	: 1 of 5
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Contact	: Customer Services ES
Address	: 10 Welder Road, Seven Hills, NSW	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 9996	Date Samples Received	: 17-Jan-2020 14:15
Order number	: ----	Date Analysis Commenced	: 20-Jan-2020
C-O-C number	: ----	Issue Date	: 23-Jan-2020 19:51
Sampler	: SAM SCULLY		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Gaston Allende	R&D Chemist	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	DUP-7A	DUP-8A	DUP-9A	----	----
			Client sampling date / time	15-Jan-2020 00:00	15-Jan-2020 00:00	15-Jan-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2001581-001	ES2001581-002	ES2001581-003	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**7.9**	**3.9**	**5.9**	**----**	**----**
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.1	mg/kg	**9.7**	**6.7**	**6.2**	**----**	**----**
Cadmium	7440-43-9	0.1	mg/kg	<0.1	**0.1**	<0.1	**----**	**----**
Chromium	7440-47-3	0.1	mg/kg	**15.2**	**7.7**	**13.7**	**----**	**----**
Copper	7440-50-8	0.1	mg/kg	**19.0**	**22.1**	**26.7**	**----**	**----**
Nickel	7440-02-0	0.1	mg/kg	**4.7**	**16.0**	**14.7**	**----**	**----**
Lead	7439-92-1	0.1	mg/kg	**23.0**	**19.7**	**20.7**	**----**	**----**
Zinc	7440-66-6	0.5	mg/kg	**43.7**	**78.8**	**75.4**	**----**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	**----**	**----**
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	**----**	**----**
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**----**	**----**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**----**	**----**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**85.3**	**86.5**	**84.4**	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	DUP-7A	DUP-8A	DUP-9A	----	----
				Client sampling date / time	15-Jan-2020 00:00	15-Jan-2020 00:00	15-Jan-2020 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2001581-001	ES2001581-002	ES2001581-003	--------	--------
					Result	Result	Result	----	----
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		89.3	90.5	89.1	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		87.3	87.6	90.6	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		102	100	103	----	----
Anthracene-d10	1719-06-8	0.5	%		95.2	95.0	94.8	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		100	104	102	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2000668**	Page	: 1 of 4
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Telephone	: +61-2-8784 8555
Project	: 9996 Milperra	Date Samples Received	: 10-Jan-2020
Site	: ----	Issue Date	: 16-Jan-2020
Sampler	: SAM SCULLY	No. of samples received	: 3
Order number	: ----	No. of samples analysed	: 3

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	ES2000502--001	Anonymous	**Zinc**	7440-66-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
DUP-5A, DUP-6A	**09-Jan-2020**	**----**	----	----	**13-Jan-2020**	23-Jan-2020	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
DUP-5A, DUP-6A	**09-Jan-2020**	**13-Jan-2020**	07-Jul-2020	✓	**14-Jan-2020**	07-Jul-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
DUP-5A, DUP-6A	**09-Jan-2020**	**13-Jan-2020**	06-Feb-2020	✓	**14-Jan-2020**	06-Feb-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
DUP-5A, DUP-6A	**09-Jan-2020**	**14-Jan-2020**	23-Jan-2020	✓	**15-Jan-2020**	23-Feb-2020	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
Dup-1A	**08-Jan-2020**	**14-Jan-2020**	06-Jul-2020	✓	**14-Jan-2020**	06-Jul-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
Dup-1A	**08-Jan-2020**	**----**	----	----	**13-Jan-2020**	05-Feb-2020	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2000668**	Page	: 1 of 6
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Contact	: Customer Services ES
Address	: 10 Welder Road, Seven Hills, NSW	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 9996 Milperra	Date Samples Received	: 10-Jan-2020
Order number	: ----	Date Analysis Commenced	: 13-Jan-2020
C-O-C number	: ----	Issue Date	: 16-Jan-2020
Sampler	: SAM SCULLY		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 2806520)									
ES2000711-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	2	<1	78.2	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	50	45	10.1	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	31	34	10.7	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	23	<5	129	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	375	408	8.44	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	236	232	1.37	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	269	256	4.94	0% - 20%
ES2000502-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	45	51	11.2	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	12	13	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	6	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	22	5.42	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	19	22	13.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	2980	3370	12.5	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2806524)									
ES2000668-002	DUP-6A	EA055: Moisture Content	----	0.1	%	6.7	6.9	3.55	No Limit
ES2000711-005	Anonymous	EA055: Moisture Content	----	0.1	%	9.7	9.4	2.71	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2806519)									
ES2000502-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2000711-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2807357)									
ES2000754-053	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2807357) - continued									
ES2000754-053	Anonymous	EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 2807237)									
ES2000703-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.013	0.013	0.00	0% - 50%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.022	0.022	0.00	No Limit
ES2000674-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.585	0.584	0.250	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.011	0.012	10.7	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2805657)									
ES2000668-003	Dup-1A	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
ES2000792-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit

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

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

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 2806520)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	108	86.0	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	106	83.0	113
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	92.8	76.0	128
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	110	86.0	120
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	102	80.0	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	105	87.0	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	109	80.0	122
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2806519)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	84.9	70.0	105
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2807357)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	101	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	99.6	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	98.3	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	103	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	107	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.6	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	96.5	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	91.7	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	89.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	91.9	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	99.0	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	108	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	95.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	91.8	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	89.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	96.3	63.0	121

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2807237)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.7	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	100	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	93.8	86.0	116

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 2807237) - continued								
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	96.5	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.6	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	95.5	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	94.1	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2805657)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	107	77.0	111

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 2806520)							
ES2000502-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	99.9	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	104	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	110	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	106	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	106	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	107	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	# Not Determined	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2806519)							
ES2000502-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	89.0	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2807357)							
ES2000754-053	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	102	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	106	70.0	130

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 2807237)							
ES2000668-003	Dup-1A	EG020A-T: Arsenic	7440-38-2	1 mg/L	109	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	97.8	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	92.9	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	101	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	96.4	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 2807237) - continued							
ES2000668-003	Dup-1A	EG020A-T: Nickel	7440-02-0	1 mg/L	97.8	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	98.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2805657)							
ES2000749-001	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	76.6	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2000668**	Page	: 1 of 6
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Contact	: Customer Services ES
Address	: 10 Welder Road, Seven Hills, NSW	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 9996 Milperra	Date Samples Received	: 10-Jan-2020 11:30
Order number	: ----	Date Analysis Commenced	: 13-Jan-2020
C-O-C number	: ----	Issue Date	: 16-Jan-2020 13:26
Sampler	: SAM SCULLY		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	DUP-5A	DUP-6A	----	----	----
			Client sampling date / time	09-Jan-2020 00:00	09-Jan-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2000668-001	ES2000668-002	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**10.1**	**6.7**	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	**7**	**8**	----	----	----
Copper	7440-50-8	5	mg/kg	**12**	**12**	----	----	----
Lead	7439-92-1	5	mg/kg	**10**	**18**	----	----	----
Nickel	7440-02-0	2	mg/kg	**4**	**3**	----	----	----
Zinc	7440-66-6	5	mg/kg	**42**	**51**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**77.1**	**80.0**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	DUP-5A	DUP-6A	----	----	----
				Client sampling date / time	09-Jan-2020 00:00	09-Jan-2020 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2000668-001	ES2000668-002	--------	--------	--------
					Result	Result	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		**81.8**	**82.8**	**----**	**----**	**----**
2.4.6-Tribromophenol	118-79-6	0.5	%		**59.5**	**61.2**	**----**	**----**	**----**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**88.5**	**87.8**	**----**	**----**	**----**
Anthracene-d10	1719-06-8	0.5	%		**84.0**	**83.9**	**----**	**----**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%		**88.1**	**94.5**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Dup-1A	----	----	----	----
				Client sampling date / time	08-Jan-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2000668-003	--------	--------	--------	--------
					Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		**0.001**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0017**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		**0.001**	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.003**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.030**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		**0.001**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.069**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ **Sydney Laboratory** Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066 02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172 07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2, 91 Leach Highway, Kewdale WA 6105 08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 2 Kingston Town Close, Oakleigh, VIC 3166 03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully				
Handed over by	Sam Scully				
Email for Invoice	Enviro@allgeo.com.au				
Email for Results	Enviro@allgeo.com.au				

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964, WA Guidelines)

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

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

№		Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	1	DUP-1A	16/12/19	Soil	X	X									Please forward to ALS
2		DUP-02	16/12/19	Soil	X	X									
3	2	DUP-2A	16/12/19	Soil	X	X									Please forward to ALS
4		DUP-03	17/12/19	Soil	X	X									
5	3	DUP-3A	17/12/19	Soil	X	X									Please forward to ALS
6		DUP-04	18/12/19	Soil	X	X									
7	4	DUP-4A	18/12/19	Soil	X	X									Please forward to ALS
8		DUP-10	17/12/19	Soil											
9	5	DUP-10A	17/12/19	Soil											Please forward to ALS
10		DUP-11	17/12/19	Soil											
		Total Counts													

Environmental Division Sydney
Work Order Reference
ES1942492

Telephone : + 61-2-8784 8555

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

Name: Sam Scully Signature: Date: 17-12-19 Time: 4 : 00pm

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

Rec- Sam 20/12/19 1850 12.2°C 12.2°C

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ **Sydney Laboratory** Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066 02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172 07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2, 91 Leach Highway, Kewdale WA 6105 08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 2 Kingston Town Close, Oakleigh, VIC 3166 03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully				
Handed over by	Sam Scully				
Email for Invoice	Enviro@allgeo.com.au				
Email for Results	Enviro@allgeo.com.au				

Containers: 1L Plastic; 250mL Plastic; 125mL Amber Glass; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Please Specify e.g. ASTM/BS/AS/NEPM/WA Guidelines)

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

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

№		Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	6	DUP-11A	16/12/19	Soil											Please forward to ALS
2		DUP-12	16/12/19	Soil											
3	7	DUP-12A	16/12/19	Soil											Please forward to ALS
4		DUP-13	17/12/19	Soil											
5	8	DUP-13A	17/12/19	Soil											Please forward to ALS
6		DUP-14	18/12/19	Soil	X	X									
7	9	DUP-14A	18/12/19	Soil	X	X									Please forward to ALS
8		TRIP SPIKE	16/12/19	Soil								X			
9		TRIP BLANK	16/12/19	Soil								X			
10		TRIP SPIKE	17/12/19	Soil								X			
		Total Counts													

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal | Name: Sam Scully | Signature | Date: 19-12-19 | Time: 4 : 00pm

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

Rec'd Scaffer 20/12/19 1850 12°C

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ **Sydney Laboratory** Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066 02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172 07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2, 91 Leach Highway, Kewdale WA 6105 08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 2 Kingston Town Close, Oakleigh, VIC 3166 03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

| | | | | |

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1942492**	Page	: 1 of 5
Amendment	: **1**		
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Contact	: Customer Services ES
Address	: 10 Welder Road, Seven Hills, NSW	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 9996 Milperra	Date Samples Received	: 20-Dec-2019 15:30
Order number	: ----	Date Analysis Commenced	: 23-Dec-2019
C-O-C number	: ----	Issue Date	: 15-Jan-2020 11:17
Sampler	: SAM SCULLY		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 9		
No. of samples analysed	: 5		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- Amendment (15/01/2020): This report has been amended as a result of a request to change sample identification numbers (IDs) received by ALS from Sam Scully on 15/1/2020. All analysis results are as per the previous report.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	DUP-1A	DUP-2A	DUP-3A	DUP-4A	DUP-14A
			Client sampling date / time	16-Dec-2019 00:00	16-Dec-2019 00:00	17-Dec-2019 00:00	18-Dec-2019 00:00	18-Dec-2019 00:00
Compound	CAS Number	LOR	Unit	ES1942492-001	ES1942492-002	ES1942492-003	ES1942492-004	ES1942492-009
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	5.7	5.5	5.7	2.0	2.9
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	23	9	11	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	36	25	19	6	5
Copper	7440-50-8	5	mg/kg	9	11	15	23	11
Lead	7439-92-1	5	mg/kg	21	27	28	26	15
Nickel	7440-02-0	2	mg/kg	5	5	12	4	3
Zinc	7440-66-6	5	mg/kg	58	44	34	86	74
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	72.9	75.2	72.6	77.7	74.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	DUP-1A	DUP-2A	DUP-3A	DUP-4A	DUP-14A
				Client sampling date / time	16-Dec-2019 00:00	16-Dec-2019 00:00	17-Dec-2019 00:00	18-Dec-2019 00:00	18-Dec-2019 00:00
Compound	CAS Number	LOR	Unit		ES1942492-001	ES1942492-002	ES1942492-003	ES1942492-004	ES1942492-009
					Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		76.5	77.8	75.9	81.2	78.8
2.4.6-Tribromophenol	118-79-6	0.5	%		62.6	66.3	72.2	73.6	78.6
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		81.8	83.9	79.8	85.4	83.2
Anthracene-d10	1719-06-8	0.5	%		76.3	77.1	75.3	81.0	77.7
4-Terphenyl-d14	1718-51-0	0.5	%		79.4	81.4	78.8	84.6	81.3

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES1942492**	Page	: 1 of 4
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Telephone	: +61-2-8784 8555
Project	: 9996 Milperra	Date Samples Received	: 20-Dec-2019
Site	: ----	Issue Date	: 02-Jan-2020
Sampler	: SAM SCULLY	No. of samples received	: 9
Order number	: ----	No. of samples analysed	: 5

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) DUP-1A, DUP-2A	**16-Dec-2019**	**----**	----	----	**27-Dec-2019**	30-Dec-2019	✓
Soil Glass Jar - Unpreserved (EA055) DUP-3A	**17-Dec-2019**	**----**	----	----	**27-Dec-2019**	31-Dec-2019	✓
Soil Glass Jar - Unpreserved (EA055) DUP-4A, DUP-14A	**18-Dec-2019**	**----**	----	----	**27-Dec-2019**	01-Jan-2020	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) DUP-1A, DUP-2A	**16-Dec-2019**	**27-Dec-2019**	13-Jun-2020	✓	**27-Dec-2019**	13-Jun-2020	✓
Soil Glass Jar - Unpreserved (EG005T) DUP-3A	**17-Dec-2019**	**27-Dec-2019**	14-Jun-2020	✓	**27-Dec-2019**	14-Jun-2020	✓
Soil Glass Jar - Unpreserved (EG005T) DUP-4A, DUP-14A	**18-Dec-2019**	**27-Dec-2019**	15-Jun-2020	✓	**27-Dec-2019**	15-Jun-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) DUP-1A, DUP-2A	**16-Dec-2019**	**27-Dec-2019**	13-Jan-2020	✓	**30-Dec-2019**	13-Jan-2020	✓
Soil Glass Jar - Unpreserved (EG035T) DUP-3A	**17-Dec-2019**	**27-Dec-2019**	14-Jan-2020	✓	**30-Dec-2019**	14-Jan-2020	✓
Soil Glass Jar - Unpreserved (EG035T) DUP-4A, DUP-14A	**18-Dec-2019**	**27-Dec-2019**	15-Jan-2020	✓	**30-Dec-2019**	15-Jan-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) DUP-1A, DUP-2A	**16-Dec-2019**	**23-Dec-2019**	30-Dec-2019	✓	**27-Dec-2019**	01-Feb-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) DUP-3A	**17-Dec-2019**	**23-Dec-2019**	31-Dec-2019	✓	**27-Dec-2019**	01-Feb-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) DUP-4A, DUP-14A	**18-Dec-2019**	**23-Dec-2019**	01-Jan-2020	✓	**27-Dec-2019**	01-Feb-2020	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

QUALITY CONTROL REPORT

Work Order	: **ES1942492**	Page	: 1 of 5
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Contact	: Customer Services ES
Address	: 10 Welder Road, Seven Hills, NSW	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 9996 Milperra	Date Samples Received	: 20-Dec-2019
Order number	: ----	Date Analysis Commenced	: 23-Dec-2019
C-O-C number	: ----	Issue Date	: 02-Jan-2020
Sampler	: SAM SCULLY		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 9		
No. of samples analysed	: 5		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 2786420)									
ES1942537-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	14	13	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	26	25	0.00	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	109	122	11.3	0% - 20%
		EG005T: Copper	7440-50-8	5	mg/kg	215	210	2.65	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	350	380	8.40	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	332	336	1.22	0% - 20%
ES1942492-003	DUP-3A	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	19	12	48.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	12	9	26.5	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	11	6	53.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	13	13.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	28	21	25.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	34	26	25.8	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2786426)									
ES1942280-001	Anonymous	EA055: Moisture Content	----	0.1	%	35.2	34.2	2.72	0% - 20%
ES1942492-009	DUP-14A	EA055: Moisture Content	----	0.1	%	2.9	5.6	64.2	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2786416)									
ES1942492-003	DUP-3A	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
--------		EG035T: Mercury	7439-97-6	0.1	mg/kg	----	<0.1	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2781409)									
ES1942417-007	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2781409) - continued									
ES1942417-007	Anonymous	EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.8	0.8	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.8	0.8	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	1.6	1.6	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
ES1942543-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 2786420)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	98.0	86.0	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	95.1	83.0	113
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	99.4	76.0	128
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	97.9	86.0	120
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	94.4	80.0	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	101	87.0	123
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	104	80.0	122
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2786416)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	100	70.0	105
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2781409)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	93.6	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	95.1	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	85.0	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	91.7	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	89.7	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	95.4	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	91.6	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	90.1	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	82.3	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	78.7	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	82.2	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	89.8	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	86.2	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	79.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	76.0	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	81.0	63.0	121

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Matrix Spike (MS) Report		
Spike	SpikeRecovery(%)	Recovery Limits (%)

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 2786420)							
ES1942348-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	95.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.7	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	95.4	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	93.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	94.2	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	96.5	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	117	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2786416)							
ES1942276-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	92.6	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2781409)							
ES1942543-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	84.5	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	88.9	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1942492**	Page	: 1 of 5
Client	: **ALLIANCE GEOTECHNICAL**	Laboratory	: Environmental Division Sydney
Contact	: SAM SCULLY	Contact	: Customer Services ES
Address	: 10 Welder Road, Seven Hills, NSW	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 9996 Milperra	Date Samples Received	: 20-Dec-2019 15:30
Order number	: ----	Date Analysis Commenced	: 23-Dec-2019
C-O-C number	: ----	Issue Date	: 02-Jan-2020 17:51
Sampler	: SAM SCULLY		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 9		
No. of samples analysed	: 5		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	DUP-1A	DUP-2A	DUP-3A	DUP-4A	DUP-14A
			Client sampling date / time	16-Dec-2019 00:00	16-Dec-2019 00:00	17-Dec-2019 00:00	18-Dec-2019 00:00	18-Dec-2019 00:00
Compound	CAS Number	LOR	Unit	ES1942492-001	ES1942492-002	ES1942492-003	ES1942492-004	ES1942492-009
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	5.7	5.5	5.7	2.0	2.9
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	23	9	11	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	36	25	19	6	5
Copper	7440-50-8	5	mg/kg	9	11	15	23	11
Lead	7439-92-1	5	mg/kg	21	27	28	26	15
Nickel	7440-02-0	2	mg/kg	5	5	12	4	3
Zinc	7440-66-6	5	mg/kg	58	44	34	86	74
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	72.9	75.2	72.6	77.7	74.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	DUP-1A	DUP-2A	DUP-3A	DUP-4A	DUP-14A
				Client sampling date / time	16-Dec-2019 00:00	16-Dec-2019 00:00	17-Dec-2019 00:00	18-Dec-2019 00:00	18-Dec-2019 00:00
Compound	CAS Number	LOR	Unit		ES1942492-001	ES1942492-002	ES1942492-003	ES1942492-004	ES1942492-009
					Result	Result	Result	Result	Result
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	0.5	%		76.5	77.8	75.9	81.2	78.8
2.4.6-Tribromophenol	118-79-6	0.5	%		62.6	66.3	72.2	73.6	78.6
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		81.8	83.9	79.8	85.4	83.2
Anthracene-d10	1719-06-8	0.5	%		76.3	77.1	75.3	81.0	77.7
4-Terphenyl-d14	1718-51-0	0.5	%		79.4	81.4	78.8	84.6	81.3

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129

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Certificate of Analysis

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

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: **Sam Scully**

Report **698995-S**
Project name ADDITIONAL - 9996
Project ID 9996
Received Date Jan 29, 2020

Client Sample ID			**DUP-07**
Sample Matrix			**Soil**
Eurofins Sample No.			**S20-Ja28021**
Date Sampled			**Jan 15, 2020**
Test/Reference	LOR	Unit	
Heavy Metals			
Arsenic	2	mg/kg	16
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	29
Copper	5	mg/kg	40
Lead	5	mg/kg	26
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	6.2
Zinc	5	mg/kg	55
% Moisture	1	%	7.9

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
Metals M8	Sydney	Jan 29, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Jan 29, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: ADDITIONAL - 9996
Project ID: 9996

Order No.:
Report #: 698995
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 29, 2020 1:53 PM
Due: Jan 30, 2020
Priority: Overnight
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	DUP-07	Jan 15, 2020		Soil	S20-Ja28021	X	X
Test Counts						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							
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							
Heavy Metals							
Arsenic	%	107			70-130	Pass	
Cadmium	%	108			70-130	Pass	
Chromium	%	112			70-130	Pass	
Copper	%	109			70-130	Pass	
Lead	%	109			70-130	Pass	
Mercury	%	99			70-130	Pass	
Nickel	%	110			70-130	Pass	
Zinc	%	109			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ja23611	NCP	%	100			70-130	Pass	
Cadmium	S20-Ja23611	NCP	%	99			70-130	Pass	
Chromium	S20-Ja23611	NCP	%	99			70-130	Pass	
Copper	S20-Ja23611	NCP	%	99			70-130	Pass	
Lead	S20-Ja23611	NCP	%	97			70-130	Pass	
Mercury	S20-Ja23611	NCP	%	105			70-130	Pass	
Nickel	S20-Ja23611	NCP	%	100			70-130	Pass	
Zinc	S20-Ja23611	NCP	%	95			70-130	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			
Arsenic	S20-Ja27776	NCP	mg/kg	5.8	6.7	15	30%	Pass	
Cadmium	S20-Ja27776	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja27776	NCP	mg/kg	23	19	17	30%	Pass	
Copper	S20-Ja27776	NCP	mg/kg	44	38	13	30%	Pass	
Lead	S20-Ja27776	NCP	mg/kg	240	210	12	30%	Pass	
Mercury	S20-Ja27776	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja27776	NCP	mg/kg	15	14	7.0	30%	Pass	
Zinc	S20-Ja27776	NCP	mg/kg	150	180	17	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

Andrew Black	Analytical Services Manager
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.

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#AU04_Enviro_Sample_NSW

To: Andrew Black
Subject: RE: OVERNIGHT TAT RETEST: Fwd: Eurofins Test Results, Invoice - Report 697102 : Site 9996 (9996)

-------- Original message --------
From: Sam Scully <sam@allgeo.com.au>
Date: 29/1/20 1:53 pm (GMT+10:00)
To: Andrew Black <AndrewBlack@eurofins.com>
Subject: RE: Eurofins Test Results, Invoice - Report 697102 : Site 9996 (9996)

EXTERNAL EMAIL*

Thanks Andrew,

Could you please run soil sample DUP-07 for metals again on overnight TAT. The concentrations are way higher than the primary sample analysed by Eurofins and triplicate analysed by ALS.

Thanks mate,

Sam Scully

From: AndrewBlack@eurofins.com <AndrewBlack@eurofins.com>
Sent: Thursday, 23 January 2020 7:47 PM
To: Sam Scully <sam@allgeo.com.au>
Cc: enviro <enviro@allgeo.com.au>; admin <admin@allgeo.com.au>
Subject: Eurofins Test Results, Invoice - Report 697102 : Site 9996 (9996)

Regards

Andrew Black
Analytical Services Manager

Eurofins | Environment Testing
Unit 7
7 Friesian Close
SANDGATE NSW 2304
AUSTRALIA
Phone: +61 299 008 490
Mobile: +61 410 220 750
Email: AndrewBlack@eurofins.com
Website:environment.eurofins.com.au
EnviroNote 1079 - PFAS Fingerprinting
EnviroNote 1080 - Total Organofluorine Analysis & PFAS Investigations

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Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

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: **Sam Scully**

Report **697102-W**
Project name 9996
Project ID 9996
Received Date Jan 16, 2020

Client Sample ID			**TRIP SPIKE**	**TRIP BLANK**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**S20-Ja12932**	**S20-Ja12933**
Date Sampled			**Jan 15, 2020**	**Jan 15, 2020**
Test/Reference	LOR	Unit		
BTEX				
Benzene	0.001	mg/L	88	< 0.001
Toluene	0.001	mg/L	89	< 0.001
Ethylbenzene	0.001	mg/L	89	< 0.001
m&p-Xylenes	0.002	mg/L	85	< 0.002
o-Xylene	0.001	mg/L	88	< 0.001
Xylenes - Total	0.003	mg/L	86	< 0.003
4-Bromofluorobenzene (surr.)	1	%	74	76

Sample History

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Description	Testing Site	Extracted	Holding Time
BTEX	Sydney	Jan 16, 2020	14 Days

- Method: LTM-ORG-2010 TRH C6-C40

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Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
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Sydney
Unit F3, Building F
16 Mars Road
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IANZ # 1290

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: 9996
Project ID: 9996

Order No.:
Report #: 697102
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 16, 2020 5:51 PM
Due: Jan 23, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	TP09-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12898	X					X		X	X	X
2	TP09-0.7-0.9	Jan 15, 2020		Soil	S20-Ja12899	X								X	X
3	TP09-1.1-1.3	Jan 15, 2020		Soil	S20-Ja12900	X								X	X
4	TP12-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12901	X					X		X	X	X
5	TP12-2.6-2.8	Jan 15, 2020		Soil	S20-Ja12902	X					X		X	X	X
6	TP13-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12903	X					X		X	X	X
7	TP13-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12904	X					X		X	X	X
8	TP16-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12905	X					X		X	X	X
9	TP16-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12906	X								X	X
10	TP17-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12907	X								X	X

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Phone : +61 3 8564 5000
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Company Name: Alliance Geotechnical
Address: 10 Welder Road
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NSW 2147

Project Name: 9996
Project ID: 9996

Order No.:
Report #: 697102
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 16, 2020 5:51 PM
Due: Jan 23, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
11	TP17-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12908	X					X		X	X	X
12	TP22-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12909	X					X		X	X	X
13	TP22-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12910	X					X		X	X	X
14	TP53-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12911	X					X		X	X	X
15	TP53-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12912	X					X		X	X	X
16	TP55-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12913									X	X
17	TP55-0.8-1.0	Jan 15, 2020		Soil	S20-Ja12914	X					X		X	X	X
18	TP56-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12915	X					X		X	X	X
19	TP56-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12916									X	X
20	TP56-1.8-2.0	Jan 15, 2020		Soil	S20-Ja12917	X					X		X	X	X
21	TP85-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12918	X					X		X	X	X
22	TP85-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12919	X									
23	TP85-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12920	X					X		X	X	X

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

Sydney
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Received: Jan 16, 2020 5:51 PM
Due: Jan 23, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
24	TP85-2.5-2.7	Jan 15, 2020		Soil	S20-Ja12921	X								X	X
25	TP101-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12922	X					X		X	X	X
26	TP101-0.8-1.0	Jan 15, 2020		Soil	S20-Ja12923	X								X	X
27	TP101-1.3-1.5	Jan 15, 2020		Soil	S20-Ja12924	X					X		X	X	X
28	DUP-07	Jan 15, 2020		Soil	S20-Ja12925				X	X				X	
29	DUP-08	Jan 15, 2020		Soil	S20-Ja12926				X	X				X	
30	DUP-09	Jan 15, 2020		Soil	S20-Ja12927				X	X				X	
31	TP09-FCS	Jan 15, 2020		Building Materials	S20-Ja12928		X								
32	TP53-FCS	Jan 15, 2020		Building Materials	S20-Ja12929		X								
33	TP56-FCS	Jan 15, 2020		Building Materials	S20-Ja12930		X								
34	TP101-FCS	Jan 15, 2020		Building	S20-Ja12931		X								

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Project ID: 9996

Order No.:
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Fax: 02 9675 1888

Received: Jan 16, 2020 5:51 PM
Due: Jan 23, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
				Materials											
35	TRIP SPIKE	Jan 15, 2020		Water	S20-Ja12932							X			
36	TRIP BLANK	Jan 15, 2020		Water	S20-Ja12933							X			
37	TP12-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12935				X	X				X	
38	TP12-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12936			X							
39	TP13-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12937			X							
40	TP16-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12938				X	X				X	
41	TP17-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12939			X							
42	TP22-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12940			X							
43	TP53-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12941			X							
44	TP53-2.3-2.5	Jan 15, 2020		Soil	S20-Ja12942			X							
45	TP55-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12943			X							
Test Counts						25	4	7	5	5	18	2	18	31	26

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							
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	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	104			70-130	Pass	
Ethylbenzene	%	101			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
o-Xylene	%	101			70-130	Pass	
Xylenes - Total	%	97			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Ja11208	NCP	%	91			70-130	Pass	
Toluene	S20-Ja11208	NCP	%	95			70-130	Pass	
Ethylbenzene	S20-Ja11208	NCP	%	95			70-130	Pass	
m&p-Xylenes	S20-Ja11208	NCP	%	95			70-130	Pass	
o-Xylene	S20-Ja11208	NCP	%	95			70-130	Pass	
Xylenes - Total	S20-Ja11208	NCP	%	95			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Ja11207	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-Ja11207	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-Ja11207	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-Ja11207	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-Ja11207	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S20-Ja11207	NCP	mg/L	< 0.003	< 0.003	<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

Authorised By

Andrew Black Analytical Services Manager

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

NATA Accredited
Accreditation Number 1261
Site Number 18217

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The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sam Scully**

Report **697102-S**
Project name 9996
Project ID 9996
Received Date Jan 16, 2020

Client Sample ID			TP09-0.0-0.2	TP09-0.7-0.9	TP09-1.1-1.3	TP12-0.9-1.1
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-Ja12898**	**S20-Ja12899**	**S20-Ja12900**	**S20-Ja12901**
Date Sampled			**Jan 15, 2020**	**Jan 15, 2020**	**Jan 15, 2020**	**Jan 15, 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	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	53	95	102	143
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP09-0.0-0.2	TP09-0.7-0.9	TP09-1.1-1.3	TP12-0.9-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12898	S20-Ja12899	S20-Ja12900	S20-Ja12901
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	%	85	80	75	80
p-Terphenyl-d14 (surr.)	1	%	77	75	77	83
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	1	mg/kg	< 1	-	-	< 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	%	84	-	-	79
Tetrachloro-m-xylene (surr.)	1	%	109	-	-	99
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Coumaphos	2	mg/kg	< 2	-	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	-	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	-	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	-	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	-	-	< 0.2

Client Sample ID			TP09-0.0-0.2	TP09-0.7-0.9	TP09-1.1-1.3	TP12-0.9-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12898	S20-Ja12899	S20-Ja12900	S20-Ja12901
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	< 0.2	-	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	-	-	< 0.2
EPN	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	-	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Merphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Monocrotophos	2	mg/kg	< 2	-	-	< 2
Naled	0.2	mg/kg	< 0.2	-	-	< 0.2
Omethoate	2	mg/kg	< 2	-	-	< 2
Phorate	0.2	mg/kg	< 0.2	-	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	-	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	-	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	-	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	133	-	-	137
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	%	84	-	-	79
Tetrachloro-m-xylene (surr.)	1	%	109	-	-	99
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	< 1
Pentachlorophenol	1	mg/kg	< 1	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	< 1

Client Sample ID			TP09-0.0-0.2	TP09-0.7-0.9	TP09-1.1-1.3	TP12-0.9-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12898	S20-Ja12899	S20-Ja12900	S20-Ja12901
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	-	-	< 5
Dinoseb	20	mg/kg	< 20	-	-	< 20
Phenol	0.5	mg/kg	< 0.5	-	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	< 20
Phenol-d6 (surr.)	1	%	75	-	-	79
Heavy Metals						
Arsenic	2	mg/kg	12	5.8	6.5	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	11	21	5.1
Copper	5	mg/kg	20	40	9.0	14
Lead	5	mg/kg	25	26	13	6.1
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Nickel	5	mg/kg	7.7	23	< 5	8.3
Zinc	5	mg/kg	51	120	9.7	54
% Moisture	1	%	7.3	6.7	14	9.5

Client Sample ID			TP12-2.6-2.8	TP13-0.0-0.2	TP13-1.9-2.1	TP16-0.9-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12902	S20-Ja12903	S20-Ja12904	S20-Ja12905
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	98	89	108	86
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

Client Sample ID			TP12-2.6-2.8	TP13-0.0-0.2	TP13-1.9-2.1	TP16-0.9-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12902	S20-Ja12903	S20-Ja12904	S20-Ja12905
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	78	72	81	77
p-Terphenyl-d14 (surr.)	1	%	83	77	84	79
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			TP12-2.6-2.8	TP13-0.0-0.2	TP13-1.9-2.1	TP16-0.9-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12902	S20-Ja12903	S20-Ja12904	S20-Ja12905
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	84	86	91	88
Tetrachloro-m-xylene (surr.)	1	%	99	99	101	100
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	137	124	133	125
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP12-2.6-2.8	TP13-0.0-0.2	TP13-1.9-2.1	TP16-0.9-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12902	S20-Ja12903	S20-Ja12904	S20-Ja12905
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	84	86	91	88
Tetrachloro-m-xylene (surr.)	1	%	99	99	101	100
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	68	62	68	67
Heavy Metals						
Arsenic	2	mg/kg	4.2	5.8	3.9	4.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.4	12	8.2	9.1
Copper	5	mg/kg	34	37	34	41
Lead	5	mg/kg	22	27	23	29
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	73	27	18	28
Zinc	5	mg/kg	240	97	82	160
% Moisture	1	%	9.5	9.4	9.6	8.8

Client Sample ID			TP16-1.9-2.1	TP17-0.9-1.1	TP17-1.9-2.1	TP22-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12906	S20-Ja12907	S20-Ja12908	S20-Ja12909
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	79	105	146	94
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	65	58	59	60
p-Terphenyl-d14 (surr.)	1	%	82	67	84	85

Client Sample ID			TP16-1.9-2.1	TP17-0.9-1.1	TP17-1.9-2.1	TP22-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12906	S20-Ja12907	S20-Ja12908	S20-Ja12909
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	0.06
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	1	mg/kg	-	-	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	0.06
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	%	-	-	99	87
Tetrachloro-m-xylene (surr.)	1	%	-	-	118	92
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			TP16-1.9-2.1	TP17-0.9-1.1	TP17-1.9-2.1	TP22-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12906	S20-Ja12907	S20-Ja12908	S20-Ja12909
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	< 1
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	%	-	-	129	135
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	%	-	-	99	87
Tetrachloro-m-xylene (surr.)	1	%	-	-	118	92
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	-	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	-	-	< 5	< 5
Dinoseb	20	mg/kg	-	-	< 20	< 20
Phenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	< 20
Phenol-d6 (surr.)	1	%	-	-	57	50

Client Sample ID			TP16-1.9-2.1	TP17-0.9-1.1	TP17-1.9-2.1	TP22-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12906	S20-Ja12907	S20-Ja12908	S20-Ja12909
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	4.8	3.5	2.9	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.7	7.9	5.8	14
Copper	5	mg/kg	16	30	13	16
Lead	5	mg/kg	11	24	19	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.0	19	< 5	9.5
Zinc	5	mg/kg	36	100	18	52
% Moisture	1	%	13	8.5	12	6.1

Client Sample ID			TP22-1.9-2.1	TP53-0.0-0.2	TP53-1.7-1.9	TP55-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12910	S20-Ja12911	S20-Ja12912	S20-Ja12913
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	112	54	98	106
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP22-1.9-2.1	TP53-0.0-0.2	TP53-1.7-1.9	TP55-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12910	S20-Ja12911	S20-Ja12912	S20-Ja12913
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	57	76	75	66
p-Terphenyl-d14 (surr.)	1	%	87	82	82	75
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	0.07	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Toxaphene	1	mg/kg	< 1	< 1	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	0.07	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	59	61	63	-
Tetrachloro-m-xylene (surr.)	1	%	91	88	93	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Coumaphos	2	mg/kg	< 2	< 2	< 2	-

Client Sample ID			TP22-1.9-2.1	TP53-0.0-0.2	TP53-1.7-1.9	TP55-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12910	S20-Ja12911	S20-Ja12912	S20-Ja12913
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Merphos	0.2	mg/kg	< 2	< 2	< 2	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Monocrotophos	2	mg/kg	< 2	< 2	< 2	-
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Omethoate	2	mg/kg	< 2	< 2	< 2	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Triphenylphosphate (surr.)	1	%	89	120	100	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	59	61	63	-
Tetrachloro-m-xylene (surr.)	1	%	91	88	93	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	-

Client Sample ID			TP22-1.9-2.1	TP53-0.0-0.2	TP53-1.7-1.9	TP55-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12910	S20-Ja12911	S20-Ja12912	S20-Ja12913
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
Dinoseb	20	mg/kg	< 20	< 20	< 20	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	-
Phenol-d6 (surr.)	1	%	85	85	86	-
Heavy Metals						
Arsenic	2	mg/kg	11	4.5	6.5	7.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.7	9.3	13	15
Copper	5	mg/kg	35	11	14	8.4
Lead	5	mg/kg	25	14	22	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	22	< 5	< 5	< 5
Zinc	5	mg/kg	100	39	28	35
% Moisture	1	%	9.4	4.9	8.9	3.9

Client Sample ID			TP55-0.8-1.0	TP56-0.0-0.2	TP56-0.9-1.1	TP56-1.8-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12914	S20-Ja12915	S20-Ja12916	S20-Ja12917
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	71	< 50	< 50
TRH C29-C36	50	mg/kg	70	63	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	70	134	< 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	%	94	102	80	72
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

Client Sample ID			TP55-0.8-1.0	TP56-0.0-0.2	TP56-0.9-1.1	TP56-1.8-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12914	S20-Ja12915	S20-Ja12916	S20-Ja12917
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	110	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	110	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	59	75	79	80
p-Terphenyl-d14 (surr.)	1	%	84	83	92	87
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	0.08	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	-	< 1

Client Sample ID			TP55-0.8-1.0	TP56-0.0-0.2	TP56-0.9-1.1	TP56-1.8-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12914	S20-Ja12915	S20-Ja12916	S20-Ja12917
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.08	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	69	83	-	86
Tetrachloro-m-xylene (surr.)	1	%	94	89	-	109
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Merphos	0.2	mg/kg	< 2	< 2	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	-	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Omethoate	2	mg/kg	< 2	< 2	-	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Triphenylphosphate (surr.)	1	%	111	116	-	134
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			TP55-0.8-1.0	TP56-0.0-0.2	TP56-0.9-1.1	TP56-1.8-2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12914	S20-Ja12915	S20-Ja12916	S20-Ja12917
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	69	83	-	86
Tetrachloro-m-xylene (surr.)	1	%	94	89	-	109
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	-	< 5
Dinoseb	20	mg/kg	< 20	< 20	-	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	< 20
Phenol-d6 (surr.)	1	%	81	84	-	79
Heavy Metals						
Arsenic	2	mg/kg	8.0	6.0	12	8.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.4	13	24	25
Copper	5	mg/kg	15	19	20	24
Lead	5	mg/kg	25	18	27	27
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	13	11
Zinc	5	mg/kg	49	30	45	34
% Moisture	1	%	4.3	5.7	9.2	9.0

Client Sample ID			TP85-0.0-0.2	TP85-1.7-1.9	TP85-2.5-2.7	TP101-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12918	S20-Ja12920	S20-Ja12921	S20-Ja12922
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	98	101	97	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	< 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	%	81	64	53	83
p-Terphenyl-d14 (surr.)	1	%	85	85	74	86

Client Sample ID			TP85-0.0-0.2	TP85-1.7-1.9	TP85-2.5-2.7	TP101-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12918	S20-Ja12920	S20-Ja12921	S20-Ja12922
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	95	77	-	77
Tetrachloro-m-xylene (surr.)	1	%	89	101	-	99
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2

Client Sample ID			TP85-0.0-0.2	TP85-1.7-1.9	TP85-2.5-2.7	TP101-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12918	S20-Ja12920	S20-Ja12921	S20-Ja12922
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	-	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Omethoate	2	mg/kg	< 2	< 2	-	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Triphenylphosphate (surr.)	1	%	134	136	-	138
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	95	77	-	77
Tetrachloro-m-xylene (surr.)	1	%	89	101	-	99
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	-	< 5
Dinoseb	20	mg/kg	< 20	< 20	-	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	< 20
Phenol-d6 (surr.)	1	%	80	74	-	77

Client Sample ID			TP85-0.0-0.2	TP85-1.7-1.9	TP85-2.5-2.7	TP101-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12918	S20-Ja12920	S20-Ja12921	S20-Ja12922
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	15	9.6	18	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	28	27	18
Copper	5	mg/kg	18	15	15	20
Lead	5	mg/kg	29	23	16	44
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.7	9.5	8.1	7.2
Zinc	5	mg/kg	38	29	23	120
% Moisture	1	%	8.5	11	16	6.3

Client Sample ID			TP101-0.8-1.0	TP101-1.3-1.5	DUP-07	DUP-08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12923	S20-Ja12924	S20-Ja12925	S20-Ja12926
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 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	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	80	98	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 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

Client Sample ID			TP101-0.8-1.0	TP101-1.3-1.5	DUP-07	DUP-08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12923	S20-Ja12924	S20-Ja12925	S20-Ja12926
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	63	INT	73	67
p-Terphenyl-d14 (surr.)	1	%	78	89	82	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	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.2	mg/kg	-	< 0.2	-	-
Toxaphene	1	mg/kg	-	< 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	%	-	71	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	92	-	-
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	-	-

Client Sample ID			TP101-0.8-1.0	TP101-1.3-1.5	DUP-07	DUP-08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12923	S20-Ja12924	S20-Ja12925	S20-Ja12926
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	-	139	-	-
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	%	-	71	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	92	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-

Client Sample ID			TP101-0.8-1.0	TP101-1.3-1.5	DUP-07	DUP-08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12923	S20-Ja12924	S20-Ja12925	S20-Ja12926
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
2-Nitrophenol	1	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Phenol-d6 (surr.)	1	%	-	71	-	-
Heavy Metals						
Arsenic	2	mg/kg	7.4	6.5	12	6.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	21	22	8.5
Copper	5	mg/kg	19	11	110000	27
Lead	5	mg/kg	25	18	32	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.9	< 5	1600	24
Zinc	5	mg/kg	45	5.6	1000	99
% Moisture	1	%	9.6	13	7.9	6.3

Client Sample ID			DUP-09	TP12-0.0-0.2	TP16-0.0-0.2
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12927	S20-Ja12935	S20-Ja12938
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			DUP-09	TP12-0.0-0.2	TP16-0.0-0.2
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-Ja12927	S20-Ja12935	S20-Ja12938
Date Sampled			Jan 15, 2020	Jan 15, 2020	Jan 15, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
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	%	64	73	85
p-Terphenyl-d14 (surr.)	1	%	75	82	89
Heavy Metals					
Arsenic	2	mg/kg	5.4	8.4	5.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	11	18	9.0
Copper	5	mg/kg	32	26	22
Lead	5	mg/kg	35	30	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	38	8.8	17
Zinc	5	mg/kg	99	79	79
% Moisture	1	%	8.3	6.7	6.3

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	Jan 21, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jan 21, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 21, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 21, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 21, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jan 21, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Jan 21, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Jan 21, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Jan 21, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Phenols (Halogenated)	Sydney	Jan 21, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Jan 21, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
% Moisture	Sydney	Jan 17, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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Brisbane
1/21 Smallwood Place
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New Zealand

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

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

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: 9996
Project ID: 9996

Order No.:
Report #: 697102
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 16, 2020 5:51 PM
Due: Jan 23, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	TP09-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12898	X					X		X	X	X
2	TP09-0.7-0.9	Jan 15, 2020		Soil	S20-Ja12899	X								X	X
3	TP09-1.1-1.3	Jan 15, 2020		Soil	S20-Ja12900	X								X	X
4	TP12-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12901	X					X		X	X	X
5	TP12-2.6-2.8	Jan 15, 2020		Soil	S20-Ja12902	X					X		X	X	X
6	TP13-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12903	X					X		X	X	X
7	TP13-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12904	X					X		X	X	X
8	TP16-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12905	X					X		X	X	X
9	TP16-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12906	X								X	X
10	TP17-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12907	X								X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
11	TP17-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12908	X					X		X	X	X
12	TP22-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12909	X					X		X	X	X
13	TP22-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12910	X					X		X	X	X
14	TP53-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12911	X					X		X	X	X
15	TP53-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12912	X					X		X	X	X
16	TP55-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12913									X	X
17	TP55-0.8-1.0	Jan 15, 2020		Soil	S20-Ja12914	X					X		X	X	X
18	TP56-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12915	X					X		X	X	X
19	TP56-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12916									X	X
20	TP56-1.8-2.0	Jan 15, 2020		Soil	S20-Ja12917	X					X		X	X	X
21	TP85-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12918	X					X		X	X	X
22	TP85-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12919	X									
23	TP85-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12920	X					X		X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
24	TP85-2.5-2.7	Jan 15, 2020		Soil	S20-Ja12921	X								X	X
25	TP101-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12922	X					X		X	X	X
26	TP101-0.8-1.0	Jan 15, 2020		Soil	S20-Ja12923	X								X	X
27	TP101-1.3-1.5	Jan 15, 2020		Soil	S20-Ja12924	X					X		X	X	X
28	DUP-07	Jan 15, 2020		Soil	S20-Ja12925				X	X				X	
29	DUP-08	Jan 15, 2020		Soil	S20-Ja12926				X	X				X	
30	DUP-09	Jan 15, 2020		Soil	S20-Ja12927				X	X				X	
31	TP09-FCS	Jan 15, 2020		Building Materials	S20-Ja12928		X								
32	TP53-FCS	Jan 15, 2020		Building Materials	S20-Ja12929		X								
33	TP56-FCS	Jan 15, 2020		Building Materials	S20-Ja12930		X								
34	TP101-FCS	Jan 15, 2020		Building	S20-Ja12931		X								

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
				Materials											
35	TRIP SPIKE	Jan 15, 2020		Water	S20-Ja12932							X			
36	TRIP BLANK	Jan 15, 2020		Water	S20-Ja12933							X			
37	TP12-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12935				X	X				X	
38	TP12-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12936			X							
39	TP13-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12937			X							
40	TP16-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12938				X	X				X	
41	TP17-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12939			X							
42	TP22-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12940			X							
43	TP53-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12941			X							
44	TP53-2.3-2.5	Jan 15, 2020		Soil	S20-Ja12942			X							
45	TP55-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12943			X							
Test Counts						25	4	7	5	5	18	2	18	31	26

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	< 1			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							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	97			70-130	Pass	
TRH C10-C14	%	73			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	98			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Xylenes - Total	%	100			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	80			70-130	Pass	
TRH C6-C10	%	90			70-130	Pass	
TRH >C10-C16	%	81			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	102			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	117			70-130	Pass	
Benz(a)anthracene	%	88			70-130	Pass	
Benzo(a)pyrene	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	%	73			70-130	Pass	
Benzo(g.h.i)perylene	%	114			70-130	Pass	
Benzo(k)fluoranthene	%	106			70-130	Pass	
Chrysene	%	113			70-130	Pass	
Dibenz(a.h)anthracene	%	121			70-130	Pass	
Fluoranthene	%	100			70-130	Pass	
Fluorene	%	103			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	96			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	99			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	88			70-130	Pass	
4.4'-DDD	%	91			70-130	Pass	
4.4'-DDE	%	89			70-130	Pass	
4.4'-DDT	%	90			70-130	Pass	
a-BHC	%	78			70-130	Pass	
Aldrin	%	93			70-130	Pass	
b-BHC	%	90			70-130	Pass	
d-BHC	%	97			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	90			70-130	Pass	
Endosulfan II	%	85			70-130	Pass	
Endosulfan sulphate	%	83			70-130	Pass	
Endrin	%	93			70-130	Pass	
Endrin aldehyde	%	79			70-130	Pass	
Endrin ketone	%	74			70-130	Pass	
g-BHC (Lindane)	%	95			70-130	Pass	
Heptachlor	%	96			70-130	Pass	
Heptachlor epoxide	%	95			70-130	Pass	
Hexachlorobenzene	%	94			70-130	Pass	
Methoxychlor	%	86			70-130	Pass	
Toxaphene	%	75			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	78			70-130	Pass	
Dimethoate	%	80			70-130	Pass	
Ethion	%	101			70-130	Pass	
Fenitrothion	%	95			70-130	Pass	
Methyl parathion	%	124			70-130	Pass	
Mevinphos	%	79			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	75			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	97			30-130	Pass	
2.4-Dichlorophenol	%	91			30-130	Pass	
2.4.5-Trichlorophenol	%	94			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.6-Trichlorophenol	%	90			30-130	Pass	
2.6-Dichlorophenol	%	94			30-130	Pass	
4-Chloro-3-methylphenol	%	101			30-130	Pass	
Pentachlorophenol	%	92			30-130	Pass	
Tetrachlorophenols - Total	%	95			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	95			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	96			30-130	Pass	
2-Methylphenol (o-Cresol)	%	95			30-130	Pass	
2-Nitrophenol	%	94			30-130	Pass	
2.4-Dimethylphenol	%	86			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	90			30-130	Pass	
4-Nitrophenol	%	97			30-130	Pass	
Dinoseb	%	79			30-130	Pass	
Phenol	%	93			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	103			70-130	Pass	
Cadmium	%	106			70-130	Pass	
Chromium	%	114			70-130	Pass	
Copper	%	116			70-130	Pass	
Lead	%	101			70-130	Pass	
Mercury	%	103			70-130	Pass	
Nickel	%	116			70-130	Pass	
Zinc	%	115			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-Ja12481	NCP	%	74			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-Ja12481	NCP	%	72			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	S20-Ja20338	NCP	%	86			70-130	Pass	
Endrin ketone	S20-Ja20338	NCP	%	73			70-130	Pass	
Methoxychlor	S20-Ja20338	NCP	%	103			70-130	Pass	
Toxaphene	S20-Ja20338	NCP	%	72			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S20-Ja07506	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-Ja18440	NCP	%	88			70-130	Pass	
Acenaphthylene	S20-Ja18440	NCP	%	91			70-130	Pass	
Anthracene	S20-Ja18440	NCP	%	83			70-130	Pass	
Benz(a)anthracene	S20-Ja18440	NCP	%	95			70-130	Pass	
Benzo(a)pyrene	S20-Ja18440	NCP	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	S20-Ja18440	NCP	%	86			70-130	Pass	
Benzo(g.h.i)perylene	S20-Ja18440	NCP	%	98			70-130	Pass	
Benzo(k)fluoranthene	S20-Ja18440	NCP	%	88			70-130	Pass	
Chrysene	S20-Ja18440	NCP	%	92			70-130	Pass	
Dibenz(a.h)anthracene	S20-Ja18440	NCP	%	113			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluoranthene	S20-Ja18440	NCP	%	88			70-130	Pass	
Fluorene	S20-Ja18440	NCP	%	89			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-Ja18440	NCP	%	110			70-130	Pass	
Naphthalene	S20-Ja18440	NCP	%	84			70-130	Pass	
Phenanthrene	S20-Ja18440	NCP	%	109			70-130	Pass	
Pyrene	S20-Ja18440	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-Ja12901	CP	%	83			70-130	Pass	
4.4'-DDD	S20-Ja12901	CP	%	93			70-130	Pass	
4.4'-DDE	S20-Ja12901	CP	%	81			70-130	Pass	
a-BHC	S20-Ja12901	CP	%	76			70-130	Pass	
Aldrin	S20-Ja12901	CP	%	84			70-130	Pass	
b-BHC	S20-Ja12901	CP	%	86			70-130	Pass	
d-BHC	S20-Ja12901	CP	%	89			70-130	Pass	
Dieldrin	S20-Ja12901	CP	%	79			70-130	Pass	
Endosulfan I	S20-Ja12901	CP	%	83			70-130	Pass	
Endosulfan II	S20-Ja12901	CP	%	75			70-130	Pass	
Endrin	S20-Ja12901	CP	%	83			70-130	Pass	
Endrin aldehyde	S20-Ja12901	CP	%	76			70-130	Pass	
g-BHC (Lindane)	S20-Ja12901	CP	%	90			70-130	Pass	
Heptachlor	S20-Ja12901	CP	%	88			70-130	Pass	
Heptachlor epoxide	S20-Ja12901	CP	%	88			70-130	Pass	
Hexachlorobenzene	S20-Ja12901	CP	%	92			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ja12901	CP	%	109			70-130	Pass	
Cadmium	S20-Ja12901	CP	%	98			70-130	Pass	
Chromium	S20-Ja12901	CP	%	113			70-130	Pass	
Copper	S20-Ja12901	CP	%	116			70-130	Pass	
Mercury	S20-Ja12901	CP	%	97			70-130	Pass	
Nickel	S20-Ja12901	CP	%	104			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ja09534	NCP	%	83			70-130	Pass	
Dimethoate	M20-Ja09534	NCP	%	75			70-130	Pass	
Ethion	M20-Ja09534	NCP	%	95			70-130	Pass	
Fenitrothion	M20-Ja09534	NCP	%	87			70-130	Pass	
Methyl parathion	M20-Ja09534	NCP	%	111			70-130	Pass	
Mevinphos	M20-Ja09534	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2.4.5-Trichlorophenol	S20-Ja08534	NCP	%	116			30-130	Pass	
2.4.6-Trichlorophenol	S20-Ja08534	NCP	%	84			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methyl-4.6-dinitrophenol	S20-Ja08534	NCP	%	125			30-130	Pass	
2-Nitrophenol	S20-Ja08534	NCP	%	125			30-130	Pass	
4-Nitrophenol	S20-Ja08534	NCP	%	92			30-130	Pass	
Phenol	S20-Ja08534	NCP	%	78			30-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-Ja12911	CP	%	94			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-Ja12911	CP	%	93			70-130	Pass	
Toluene	S20-Ja12911	CP	%	98			70-130	Pass	
Ethylbenzene	S20-Ja12911	CP	%	96			70-130	Pass	
m&p-Xylenes	S20-Ja12911	CP	%	100			70-130	Pass	
o-Xylene	S20-Ja12911	CP	%	100			70-130	Pass	
Xylenes - Total	S20-Ja12911	CP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Ja12911	CP	%	71			70-130	Pass	
TRH C6-C10	S20-Ja12911	CP	%	89			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-Ja12914	CP	%	84			70-130	Pass	
4.4'-DDD	S20-Ja12914	CP	%	102			70-130	Pass	
4.4'-DDE	S20-Ja12914	CP	%	82			70-130	Pass	
Aldrin	S20-Ja12914	CP	%	90			70-130	Pass	
b-BHC	S20-Ja12914	CP	%	89			70-130	Pass	
d-BHC	S20-Ja12914	CP	%	95			70-130	Pass	
Dieldrin	S20-Ja12914	CP	%	83			70-130	Pass	
Endosulfan I	S20-Ja12914	CP	%	87			70-130	Pass	
Endosulfan II	S20-Ja12914	CP	%	79			70-130	Pass	
Endosulfan sulphate	S20-Ja12914	CP	%	75			70-130	Pass	
Endrin	S20-Ja12914	CP	%	81			70-130	Pass	
Endrin aldehyde	S20-Ja12914	CP	%	72			70-130	Pass	
g-BHC (Lindane)	S20-Ja12914	CP	%	92			70-130	Pass	
Heptachlor	S20-Ja12914	CP	%	88			70-130	Pass	
Heptachlor epoxide	S20-Ja12914	CP	%	92			70-130	Pass	
Hexachlorobenzene	S20-Ja12914	CP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ja12922	CP	%	85			70-130	Pass	
Cadmium	S20-Ja12922	CP	%	92			70-130	Pass	
Chromium	S20-Ja12922	CP	%	90			70-130	Pass	
Copper	S20-Ja12922	CP	%	95			70-130	Pass	
Lead	S20-Ja12922	CP	%	106			70-130	Pass	
Mercury	S20-Ja12922	CP	%	105			70-130	Pass	
Nickel	S20-Ja12922	CP	%	100			70-130	Pass	
Zinc	S20-Ja12922	CP	%	92			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-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<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-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-Ja16219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-Ja11193	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-Ja11193	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S20-Ja11193	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-Ja11193	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ja12900	CP	mg/kg	6.5	8.0	21	30%	Pass	
Cadmium	S20-Ja12900	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja12900	CP	mg/kg	21	26	22	30%	Pass	
Copper	S20-Ja12900	CP	mg/kg	9.0	12	30	30%	Pass	
Lead	S20-Ja12900	CP	mg/kg	13	17	32	30%	Fail	Q15
Mercury	S20-Ja12900	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja12900	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-Ja12900	CP	mg/kg	9.7	18	59	30%	Fail	Q15
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-Ja12905	CP	%	8.8	8.6	3.0	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S20-Ja10822	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S20-Ja10822	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S20-Ja10822	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S20-Ja10822	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S20-Ja10822	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S20-Ja10822	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S20-Ja10822	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S20-Ja10822	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S20-Ja10822	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S20-Ja10822	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S20-Ja10822	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S20-Ja10822	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S20-Ja10822	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S20-Ja10822	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-Ja10822	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S20-Ja10822	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S20-Ja10822	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S20-Ja10822	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ja12910	CP	mg/kg	11	5.5	66	30%	Fail	Q15
Cadmium	S20-Ja12910	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja12910	CP	mg/kg	7.7	8.8	13	30%	Pass	
Copper	S20-Ja12910	CP	mg/kg	35	32	8.0	30%	Pass	
Lead	S20-Ja12910	CP	mg/kg	25	24	<1	30%	Pass	
Mercury	S20-Ja12910	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja12910	CP	mg/kg	22	16	30	30%	Pass	
Zinc	S20-Ja12910	CP	mg/kg	100	84	21	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-Ja12912	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-Ja12912	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-Ja12912	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-Ja12912	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-Ja12912	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-Ja12912	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-Ja12912	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-Ja12912	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-Ja12912	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S20-Ja12912	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S20-Ja12912	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S20-Ja12912	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S20-Ja12912	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S20-Ja12912	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S20-Ja12912	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S20-Ja12912	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S20-Ja12912	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-Ja12913	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Ja12913	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-Ja12913	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-Ja12913	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-Ja12913	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-Ja12913	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S20-Ja12913	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Ja12913	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-Ja12913	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-Ja12915	CP	%	5.7	6.0	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ja12921	CP	mg/kg	18	14	25	30%	Pass	
Cadmium	S20-Ja12921	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja12921	CP	mg/kg	27	25	8.0	30%	Pass	
Copper	S20-Ja12921	CP	mg/kg	15	17	11	30%	Pass	
Lead	S20-Ja12921	CP	mg/kg	16	14	13	30%	Pass	
Mercury	S20-Ja12921	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja12921	CP	mg/kg	8.1	6.9	16	30%	Pass	
Zinc	S20-Ja12921	CP	mg/kg	23	23	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-Ja12926	CP	%	6.3	6.4	2.0	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

Andrew Black	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.

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Certificate of Analysis

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.

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

Attention:	Sam Scully
Report	697102-AID
Project Name	9996
Project ID	9996
Received Date	Jan 16, 2020
Date Reported	Jan 23, 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.*

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.

Project Name 9996
Project ID 9996
Date Sampled Jan 15, 2020
Report 697102-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP09-0.0-0.2	20-Ja12898	Jan 15, 2020	Approximate Sample 616g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP09-0.7-0.9	20-Ja12899	Jan 15, 2020	Approximate Sample 773g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP09-1.1-1.3	20-Ja12900	Jan 15, 2020	Approximate Sample 486g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP12-0.9-1.1	20-Ja12901	Jan 15, 2020	Approximate Sample 928g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP12-2.6-2.8	20-Ja12902	Jan 15, 2020	Approximate Sample 1088g Sample consisted of: Brown coarse-grained soil, rocks and fragments of shale	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP13-0.0-0.2	20-Ja12903	Jan 15, 2020	Approximate Sample 877g Sample consisted of: Brown coarse-grained soil, rocks and fragments of shale	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP13-1.9-2.1	20-Ja12904	Jan 15, 2020	Approximate Sample 1023g Sample consisted of: Brown coarse-grained soil, rocks and fragments of shale	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP16-0.9-1.1	20-Ja12905	Jan 15, 2020	Approximate Sample 698g Sample consisted of: Brown coarse-grained soil, rocks and fragments of shale	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP16-1.9-2.1	20-Ja12906	Jan 15, 2020	Approximate Sample 502g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP17-0.9-1.1	20-Ja12907	Jan 15, 2020	Approximate Sample 915g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP17-1.9-2.1	20-Ja12908	Jan 15, 2020	Approximate Sample 941g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP22-0.0-0.2	20-Ja12909	Jan 15, 2020	Approximate Sample 634g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP22-1.9-2.1	20-Ja12910	Jan 15, 2020	Approximate Sample 713g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP53-0.0-0.2	20-Ja12911	Jan 15, 2020	Approximate Sample 642g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP53-1.7-1.9	20-Ja12912	Jan 15, 2020	Approximate Sample 661g Sample consisted of: Brown coarse-grained soil, rocks and bituminous material	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP55-0.8-1.0	20-Ja12914	Jan 15, 2020	Approximate Sample 852g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP56-0.0-0.2	20-Ja12915	Jan 15, 2020	Approximate Sample 670g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP56-1.8-2.0	20-Ja12917	Jan 15, 2020	Approximate Sample 759g Sample consisted of: Brown coarse-grained soil, rocks and glass	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP85-0.0-0.2	20-Ja12918	Jan 15, 2020	Approximate Sample 572g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP85-0.9-1.1	20-Ja12919	Jan 15, 2020	Approximate Sample 715g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP85-1.7-1.9	20-Ja12920	Jan 15, 2020	Approximate Sample 617g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP85-2.5-2.7	20-Ja12921	Jan 15, 2020	Approximate Sample 504g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP101-0.0-0.2	20-Ja12922	Jan 15, 2020	Approximate Sample 570g Sample consisted of: Brown coarse-grained soil, rocks and bituminous material	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP101-0.8-1.0	20-Ja12923	Jan 15, 2020	Approximate Sample 622g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP101-1.3-1.5	20-Ja12924	Jan 15, 2020	Approximate Sample 492g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP09-FCS	20-Ja12928	Jan 15, 2020	Approximate Sample 9g / 30x30x5mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected.
TP53-FCS	20-Ja12929	Jan 15, 2020	Approximate Sample 125g / 95x70x10mm Sample consisted of: Grey compressed fibre cement material	Chrysotile and amosite asbestos detected.
TP56-FCS	20-Ja12930	Jan 15, 2020	Approximate Sample 14g / 60x20x5mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected.
TP101-FCS	20-Ja12931	Jan 15, 2020	Approximate Sample 9g / 65x40x5mm Sample consisted of: Grey fibre cement material	Chrysotile 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	Jan 16, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Jan 16, 2020	Indefinite

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: 9996
Project ID: 9996

Order No.:
Report #: 697102
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 16, 2020 5:51 PM
Due: Jan 23, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	TP09-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12898	X					X		X	X	X
2	TP09-0.7-0.9	Jan 15, 2020		Soil	S20-Ja12899	X								X	X
3	TP09-1.1-1.3	Jan 15, 2020		Soil	S20-Ja12900	X								X	X
4	TP12-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12901	X					X		X	X	X
5	TP12-2.6-2.8	Jan 15, 2020		Soil	S20-Ja12902	X					X		X	X	X
6	TP13-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12903	X					X		X	X	X
7	TP13-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12904	X					X		X	X	X
8	TP16-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12905	X					X		X	X	X
9	TP16-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12906	X								X	X
10	TP17-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12907	X								X	X

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: 9996
Project ID: 9996

Order No.:
Report #: 697102
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 16, 2020 5:51 PM
Due: Jan 23, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
11	TP17-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12908	X					X		X	X	X
12	TP22-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12909	X					X		X	X	X
13	TP22-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12910	X					X		X	X	X
14	TP53-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12911	X					X		X	X	X
15	TP53-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12912	X					X		X	X	X
16	TP55-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12913									X	X
17	TP55-0.8-1.0	Jan 15, 2020		Soil	S20-Ja12914	X					X		X	X	X
18	TP56-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12915	X					X		X	X	X
19	TP56-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12916									X	X
20	TP56-1.8-2.0	Jan 15, 2020		Soil	S20-Ja12917	X					X		X	X	X
21	TP85-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12918	X					X		X	X	X
22	TP85-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12919	X									
23	TP85-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12920	X					X		X	X	X

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Polycyclic Aromatic Hydrocarbons	Metals M8	Phenols (IWRG 621)	BTEX	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B7
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
24	TP85-2.5-2.7	Jan 15, 2020		Soil	S20-Ja12921	X								X	X
25	TP101-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12922	X					X		X	X	X
26	TP101-0.8-1.0	Jan 15, 2020		Soil	S20-Ja12923	X								X	X
27	TP101-1.3-1.5	Jan 15, 2020		Soil	S20-Ja12924	X					X		X	X	X
28	DUP-07	Jan 15, 2020		Soil	S20-Ja12925				X	X				X	
29	DUP-08	Jan 15, 2020		Soil	S20-Ja12926				X	X				X	
30	DUP-09	Jan 15, 2020		Soil	S20-Ja12927				X	X				X	
31	TP09-FCS	Jan 15, 2020		Building Materials	S20-Ja12928		X								
32	TP53-FCS	Jan 15, 2020		Building Materials	S20-Ja12929		X								
33	TP56-FCS	Jan 15, 2020		Building Materials	S20-Ja12930		X								
34	TP101-FCS	Jan 15, 2020		Building	S20-Ja12931		X								

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
				Materials											
35	TRIP SPIKE	Jan 15, 2020		Water	S20-Ja12932							X			
36	TRIP BLANK	Jan 15, 2020		Water	S20-Ja12933							X			
37	TP12-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12935				X	X				X	
38	TP12-1.9-2.1	Jan 15, 2020		Soil	S20-Ja12936			X							
39	TP13-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12937			X							
40	TP16-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12938				X	X				X	
41	TP17-0.0-0.2	Jan 15, 2020		Soil	S20-Ja12939			X							
42	TP22-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12940			X							
43	TP53-0.9-1.1	Jan 15, 2020		Soil	S20-Ja12941			X							
44	TP53-2.3-2.5	Jan 15, 2020		Soil	S20-Ja12942			X							
45	TP55-1.7-1.9	Jan 15, 2020		Soil	S20-Ja12943			X							
Test Counts						25	4	7	5	5	18	2	18	31	26

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

S20-Ja12900, S20-Ja12924: Samples received were less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

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:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	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.

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ Sydney Laboratory
Unit F3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name		EDD Format (ESdat EQuIS, Custom)	
Contact Name				Sampler(s)	Sam Scully
Phone №				Handed over by	
Special Directions				Email for Invoice	admin@allgeo.com.au
Purchase Order				Email for Results	Enviro@allgeo.com.au
Quote ID №					

Analyses (Please refer to the Requested Analysis Table for specific analytes within each group. Date of sampling must be stated if required for Guideline compliance)

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964 WA Guidelines)

Turnaround Time (TAT) Requirements (Default will be 5 days if not ticked)
- ☐ Overnight (9am)*
- ☐ 1 Day* ☐ 2 Day*
- ☐ 3 Day* ☒ 5 Day
- * Surcharges apply
- ☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	TRH	BTEX	PAH	8 Metals	CEC/pH	OCP/OPP	PCB	Phenols	Asbestos (0.001%)	Sample Comments / Dangerous Goods Hazard Warning
1	TP09-0.0-0.2	15/01/20	Soil	X	X	X	X		X	X	X	X	
2	TP09-0.7-0.9	15/01/20	Soil	X	X	X	X					X	
3	TP09-1.1-1.3	15/01/20	Soil	X	X	X	X					X	
4	TP12-0.0-0.2	15/01/20	Soil										
5	TP12-0.9-1.1	15/01/20	Soil	X	X	X	X		X	X	X	X	
6	TP12-1.9-2.1	15/01/20	Soil										
7	TP12-2.6-2.8	15/01/20	Soil	X	X	X	X		X	X	X	X	
8	TP13-0.0-0.2	15/01/20	Soil	X	X	X	X		X	X	X	X	
9	TP13-0.9-1.1	15/01/20	Soil										
10	TP13-1.9-2.1	15/01/20	Soil	X	X	X	X		X	X	X	X	
	Total Counts												

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal | Name: Sam Scully | Signature | Date: 16-1-20 | Time

Eurofins | mgt Laboratory Use Only

Received By	Lina D	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date: 16/01/20	Time: 5:51pm	Temperature	12.2°C
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date: __/__/__	Time: __:__	Report №	697102

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☐ **Melbourne Laboratory** 2 Kingston Town Close, Oakleigh, VIC 3166 03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name		EDD Format (ESdat, EQuIS, Custom)	
Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully	
Handed over by		
Email for Invoice	admin@allgeo.com.au	
Email for Results	Enviro@allgeo.com.au	

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Ziplock (Asbestos AS4964: WA Guidelines)

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

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

Analyses (Note: Where metals are requested, please specify Total or Filtered | SUITE code must be placed in brackets after analyte)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	TRH	BTEX	PAH	8 Metals	CEC/pH	OCP/OPP	PCB	Phenols	Asbestos (0.001%)	Sample Comments / Dangerous Goods Hazard Warning
1	TP16-0.0-0.2	15/01/20	Soil										
2	TP16-0.9-1.1	15/01/20	Soil	X	X	X	X		X	X	X	X	
3	TP16-1.9-2.1	15/01/20	Soil	X	X	X	X					X	
4	TP17-0.0-0.2	15/01/20	Soil										
5	TP17-0.9-1.1	15/01/20	Soil	X	X	X	X					X	
6	TP17-1.9-2.1	15/01/20	Soil	X	X	X	X		X	X	X	X	
7	TP22-0.0-0.2	15/01/20	Soil	X	X	X	X		X	X	X	X	
8	TP22-0.9-1.1	15/01/20	Soil										
9	TP22-1.9-2.1	15/01/20	Soil	X	X	X	X		X	X	X	X	
10	TP53-0.0-0.2	15/01/20	Soil	X	X	X	X		X	X	X	X	
	Total Counts												

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal

Name: Sam Scully Signature: Date: 16-1-20 Time:

Eurofins | mgt Laboratory Use Only						
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report № 69710

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Special Directions					
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| | | | | |

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Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	
Email for Invoice	admin@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Containers: 1L Plastic; 250mL Plastic; 125mL Amber Glass; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964 WA Guidelines)

Turnaround Time (TAT) Requirements (Default will be 5 days if not ticked)
- ☐ Overnight (9am)*
- ☐ 1 Day* ☐ 2 Day*
- ☐ 3 Day* ☑ 5 Day
- * Surcharges apply
- ☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	TRH	BTEX	PAH	8 Metals	CEC/pH	OCP/OPP	PCB	Phenols	Asbestos (0.001%)	True Metals	Sample Comments / Dangerous Goods Hazard Warning
1	TP85-0.9-1.1	15/01/20	Soil									X		
2	TP85-1.7-1.9	15/01/20	Soil	X	X	X	X		X	X	X	X		
3	TP85-2.5-2.7	15/01/20	Soil	X	X	X	X					X		
4	TP101-0.0-0.2	15/01/20	Soil	X	X	X	X		X	X	X	X		
5	TP101-0.8-1.0	15/01/20	Soil	X	X	X	X					X		
6	TP101-1.3-1.5	15/01/20	Soil	X	X	X	X		X	X	X	X		
7	DUP-07	15/01/20	Soil			X	X							
8	DUP-7A	15/01/20	Soil			X							X	Please forward to ALS
9	DUP-08	15/01/20	Soil			X	X							
10	DUP-8A	15/01/20	Soil			X							X	Please forward to ALS
	Total Counts													

Method of Shipment	☐ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date	16-1-20	Time	

Eurofins | mgt Laboratory Use Only									
Received By		SYD | SNE | MEL | PER | ADL | NTL | DRW	Signature	Date	16/01/20	Time	5:51 pm	Temperature	12.2°C
Received By		SYD | SNE | MEL | PER | ADL | NTL | DRW	Signature	Date	/ /	Time	:	Report №	697102

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Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully	
Handed over by		
Email for Invoice	admin@allgeo.com.au	
Email for Results	Enviro@allgeo.com.au	

Analyses (Note: Where metals are required, please specify 1 filter or 1 field. Plus 8% ANZG to apply to quote)

Containers

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	TRH	BTEX	PAH	8 Metals	CEC/pH	OCP/OPP	PCB	Phenols	Asbestos (0.001%)	ASBESTOS ID	TRACE METALS	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964 WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	DUP-09	15/01/20	Soil			X	X																
2	DUP-9A	15/01/20	Soil			X								X									PLEASE FORWARD TO ALS
3	TP09-FCS	15/01/20	Soil										X										
4	TP53-FCS	15/01/20	Soil										X										
5	TP56-FCS	15/01/20	Soil										X										
6	TP101-FCS	15/01/20	Soil										X										
7	TRIP SPIKE / BLANK	15/01/20	Soil		X																		
8																							
9																							
10																							
	Total Counts																						

Method of Shipment ☐ Courier (#) ☐ Hand Delivered ☐ Postal Name Sam Scully Signature Date 16-1-20 Time

Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature		
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №	697102	

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

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

#AU04_Enviro_Sample_NSW

To: Sam Scully
Subject: RE: Eurofins Sample Receipt Advice - Report 697102 : Site 9996 (9996)

From: Sam Scully [mailto:sam@allgeo.com.au]
Sent: Friday, 17 January 2020 9:08 AM
To: #AU04_Enviro_Sample_NSW
Cc: enviro
Subject: RE: Eurofins Sample Receipt Advice - Report 697102 : Site 9996 (9996)

Thanks,

Could we please request metals and PAH analysis on soil samples:

- TP16-0.0-0.2; and
- TP12-0.0-0.2.

Could these results please come with all other on same COC.

Please do not hesitate to contact me if you have any queries or questions,

Kind Regards,

Sam Scully

Environmental Consultant - 0400 339 745 | **Email:** sam@allgeo.com.au

Alliance Geotechnical
ENGINEERING | ENVIRONMENTAL | TESTING
Your On-Site Geotechnical & Environmental Specialists

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Office Email: admin@allgeo.com.au - **Website:** allgeo.com.au - **Office Phone:** 1800 288 188
PO Box 275, Seven Hills NSW 1730 / Address: 10 Welder Road, Seven Hills NSW 2147

Our office administration will be closed from December 23rd and will reopen on January 6th
For any urgent or unexpected geotechnical or environmental enquiries, please phone 1800 288 188
WISHING EVERYONE HAPPY HOLIDAYS FROM THE ALLIANCE GEOTECHNICAL TEAM!

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Thursday, 16 January 2020 8:20 PM
To: Sam Scully <sam@allgeo.com.au>
Cc: enviro <enviro@allgeo.com.au>
Subject: Eurofins Sample Receipt Advice - Report 697102 : Site 9996 (9996)

Dear Valued Client,
Samples DUP-7A, DUP-8A and DUP-9A forwarded to ALS for analysis
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 the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers

as well as the requested analysis. If there are any irregularities then please contact your Eurofins | mgt Analytical Services Manager as soon as possible to make certain that they get changed.

Regards

Luca Dominici
Sample Receipt

Eurofins | Environmental Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 29900 8421
Email: EnviroSampleNSW@eurofins.com
Website:environment.eurofins.com.au

EnviroNote 1079 - PFAS Fingerprinting
EnviroNote 1080 - Total Organofluorine Analysis & PFAS Investigations

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Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

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: **Sam Scully**

Report **696041-W**
Project name MILLPERRA
Project ID 9996
Received Date Jan 09, 2020

Client Sample ID			**MW01**	**MW02**	**MW03**	**MW04**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-Ja04468**	**S20-Ja04469**	**S20-Ja04470**	**S20-Ja04471**
Date Sampled			**Jan 08, 2020**	**Jan 08, 2020**	**Jan 08, 2020**	**Jan 08, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	0.15	0.13	0.17	0.09
TRH C15-C28	0.1	mg/L	0.2	0.2	< 0.1	0.2
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	0.35	0.33	0.17	0.29
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	80	75	75	74
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW01	MW02	MW03	MW04
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ja04468	S20-Ja04469	S20-Ja04470	S20-Ja04471
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	80	75	75	74
Toluene-d8 (surr.)	1	%	91	84	81	83
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	0.07	0.05	0.08	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	0.07	0.05	0.08	< 0.05
TRH >C16-C34	0.1	mg/L	0.2	0.2	< 0.1	0.2
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	0.27	0.25	< 0.1	0.2

Client Sample ID			MW01	MW02	MW03	MW04
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ja04468	S20-Ja04469	S20-Ja04470	S20-Ja04471
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	53	78	89	72
p-Terphenyl-d14 (surr.)	1	%	80	126	145	127
Organochlorine Pesticides						
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin aldehyde	0.0001	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toxaphene	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	INT	54	73	68
Tetrachloro-m-xylene (surr.)	1	%	50	82	89	76

Client Sample ID			MW01	MW02	MW03	MW04
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ja04468	S20-Ja04469	S20-Ja04470	S20-Ja04471
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-S	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-O	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethoprop	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Phorate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	INT	104	120	101
Polychlorinated Biphenyls						
Aroclor-1016	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1221	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Aroclor-1232	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1242	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1248	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1254	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aroclor-1260	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Total PCB*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	INT	54	73	68
Tetrachloro-m-xylene (surr.)	1	%	50	82	89	76

Client Sample ID			MW01	MW02	MW03	MW04
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S20-Ja04468	S20-Ja04469	S20-Ja04470	S20-Ja04471
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	0.53	0.23	0.41	1.2
Chloride	1	mg/L	10000	3200	6100	5400
Conductivity (at 25°C)	10	uS/cm	14000	4900	11000	9100
Nitrate (as N)	0.02	mg/L	5.7	0.35	0.18	0.07
pH (at 25°C)	0.1	pH Units	6.9	5.7	5.7	7.1
Sulphate (as SO4)	2	mg/L	920	710	960	740
Total Dissolved Solids Dried at 180°C ± 2°C	5	mg/L	17000	5300	9900	10000
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	430	< 20	23	1100
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	430	< 20	23	1100
Alkali Metals						
Calcium	0.5	mg/L	220	43	74	250
Magnesium	0.5	mg/L	850	140	380	380
Potassium	0.5	mg/L	26	4.2	14	53
Sodium	0.5	mg/L	4800	1800	3200	3300
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.001	< 0.001	< 0.001	0.013
Cadmium (filtered)	0.0002	mg/L	0.0017	0.0003	0.0005	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	0.001	0.002	0.003
Copper (filtered)	0.001	mg/L	< 0.001	0.030	0.007	0.022
Lead (filtered)	0.001	mg/L	0.001	0.001	0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.022	0.012	0.067	0.062
Zinc (filtered)	0.005	mg/L	0.048	0.076	0.21	0.023

Client Sample ID			MW05	MW08	DUP-01
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ja04472	S20-Ja04473	S20-Ja04474
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 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	0.06	0.13	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	0.13	-
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	%	77	72	-

Client Sample ID			MW05	MW08	DUP-01
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ja04472	S20-Ja04473	S20-Ja04474
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	-
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	-
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	-
Benzene	0.001	mg/L	< 0.001	< 0.001	-
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	-
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	-
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	-
Bromoform	0.001	mg/L	< 0.001	< 0.001	-
Bromomethane	0.001	mg/L	< 0.001	< 0.001	-
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	-
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	-
Chloroethane	0.001	mg/L	< 0.001	< 0.001	-
Chloroform	0.005	mg/L	< 0.005	< 0.005	-
Chloromethane	0.001	mg/L	< 0.001	< 0.001	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	-
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	-
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	-
Iodomethane	0.001	mg/L	< 0.001	< 0.001	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	-
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	-
Styrene	0.001	mg/L	< 0.001	< 0.001	-
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	-

Client Sample ID			MW05	MW08	DUP-01
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ja04472	S20-Ja04473	S20-Ja04474
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	-
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	-
Xylenes - Total	0.003	mg/L	< 0.003	< 0.003	-
Total MAH*	0.003	mg/L	< 0.003	< 0.003	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	-
4-Bromofluorobenzene (surr.)	1	%	77	72	-
Toluene-d8 (surr.)	1	%	89	84	-
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	< 0.05	0.05	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	-
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	-
2-Fluorobiphenyl (surr.)	1	%	147	93	-
p-Terphenyl-d14 (surr.)	1	%	INT	INT	-
Organochlorine Pesticides					
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001	-
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001	-
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001	-
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001	-
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001	-
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001	-
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001	-
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001	-
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001	-
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001	-

Client Sample ID			MW05	MW08	DUP-01
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ja04472	S20-Ja04473	S20-Ja04474
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001	-
Endrin	0.0001	mg/L	< 0.0001	< 0.0001	-
Endrin aldehyde	0.0001	mg/L	< 0.0002	< 0.0002	-
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001	-
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001	-
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001	-
Toxaphene	0.01	mg/L	< 0.01	< 0.01	-
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	-
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	-
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	-
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	-
Dibutylchlorendate (surr.)	1	%	INT	112	-
Tetrachloro-m-xylene (surr.)	1	%	INT	104	-
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	-
Bolstar	0.002	mg/L	< 0.002	< 0.002	-
Chlorfenvinphos	0.002	mg/L	< 0.002	< 0.002	-
Chlorpyrifos	0.02	mg/L	< 0.02	< 0.02	-
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	-
Coumaphos	0.02	mg/L	< 0.02	< 0.02	-
Demeton-S	0.02	mg/L	< 0.02	< 0.02	-
Demeton-O	0.002	mg/L	< 0.002	< 0.002	-
Diazinon	0.002	mg/L	< 0.002	< 0.002	-
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	-
Dimethoate	0.002	mg/L	< 0.002	< 0.002	-
Disulfoton	0.002	mg/L	< 0.002	< 0.002	-
EPN	0.002	mg/L	< 0.002	< 0.002	-
Ethion	0.002	mg/L	< 0.002	< 0.002	-
Ethoprop	0.002	mg/L	< 0.002	< 0.002	-
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	-
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	-
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	-
Fenthion	0.002	mg/L	< 0.002	< 0.002	-
Malathion	0.002	mg/L	< 0.002	< 0.002	-
Merphos	0.002	mg/L	< 0.002	< 0.002	-
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	-
Mevinphos	0.002	mg/L	< 0.002	< 0.002	-
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	-
Naled	0.002	mg/L	< 0.002	< 0.002	-
Omethoate	0.002	mg/L	< 0.002	< 0.002	-
Phorate	0.002	mg/L	< 0.002	< 0.002	-
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	-
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	-
Ronnel	0.002	mg/L	< 0.002	< 0.002	-
Terbufos	0.002	mg/L	< 0.002	< 0.002	-

Client Sample ID			MW05	MW08	DUP-01
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-Ja04472	S20-Ja04473	S20-Ja04474
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	-
Tokuthion	0.002	mg/L	< 0.002	< 0.002	-
Trichloronate	0.002	mg/L	< 0.002	< 0.002	-
Triphenylphosphate (surr.)	1	%	INT	INT	-
Polychlorinated Biphenyls					
Aroclor-1016	0.005	mg/L	< 0.005	< 0.005	-
Aroclor-1221	0.001	mg/L	< 0.001	< 0.001	-
Aroclor-1232	0.005	mg/L	< 0.005	< 0.005	-
Aroclor-1242	0.005	mg/L	< 0.005	< 0.005	-
Aroclor-1248	0.005	mg/L	< 0.005	< 0.005	-
Aroclor-1254	0.005	mg/L	< 0.005	< 0.005	-
Aroclor-1260	0.005	mg/L	< 0.005	< 0.005	-
Total PCB*	0.001	mg/L	< 0.001	< 0.001	-
Dibutylchlorendate (surr.)	1	%	INT	112	-
Tetrachloro-m-xylene (surr.)	1	%	INT	104	-
Ammonia (as N)	0.01	mg/L	0.47	0.42	-
Chloride	1	mg/L	10000	9600	-
Conductivity (at 25°C)	10	uS/cm	14000	23000	-
Nitrate (as N)	0.02	mg/L	< 0.02	0.17	-
pH (at 25°C)	0.1	pH Units	6.7	5.9	-
Sulphate (as SO4)	2	mg/L	960	730	-
Total Dissolved Solids Dried at 180°C ± 2°C	5	mg/L	16000	17000	-
Alkalinity (speciated)					
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	320	110	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	320	110	-
Alkali Metals					
Calcium	0.5	mg/L	340	150	-
Magnesium	0.5	mg/L	770	700	-
Potassium	0.5	mg/L	53	32	-
Sodium	0.5	mg/L	4900	4700	-
Heavy Metals					
Arsenic (filtered)	0.001	mg/L	0.004	0.001	0.001
Cadmium (filtered)	0.0002	mg/L	0.013	0.016	0.0017
Chromium (filtered)	0.001	mg/L	0.015	0.003	< 0.001
Copper (filtered)	0.001	mg/L	0.003	0.002	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.21	0.34	0.019
Zinc (filtered)	0.005	mg/L	0.089	0.77	0.043

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	Jan 09, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jan 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 09, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 09, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 09, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Volatile Organics	Sydney	Jan 09, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Conductivity (at 25°C)	Sydney	Jan 10, 2020	28 Days
- Method: LTM-INO-4030 Conductivity			
pH (at 25°C)	Sydney	Jan 10, 2020	1 Days
- Method: LTM-GEN-7090 pH in water by ISE			
Total Dissolved Solids Dried at 180°C ± 2°C	Sydney	Jan 10, 2020	7 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Alkalinity (speciated)	Melbourne	Jan 13, 2020	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Organochlorine Pesticides	Sydney	Jan 09, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Jan 09, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Jan 09, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Major Cations			
Ammonia (as N)	Sydney	Jan 10, 2020	28 Days
- Method: LTM-INO-4200 Ammonia by Discrete Analyser			
Alkali Metals	Sydney	Jan 16, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Major Anions			
Chloride	Sydney	Jan 10, 2020	28 Days
- Method: E045 /E047 Chloride			
Nitrate (as N)	Melbourne	Jan 13, 2020	28 Days
- Method: LTM-INO-4120 Analysis of NOx NO2 NH3 by FIA			
Sulphate (as SO4)	Sydney	Jan 10, 2020	28 Days
- Method: E045 Anions by Ion Chromatography			
Metals M8 filtered	Sydney	Jan 09, 2020	28 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 e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILLPERRA
Project ID: 9996

Order No.:
Report #: 696041
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 9, 2020 5:44 PM
Due: Jan 16, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	CANCELLED	Conductivity (at 25°C)	Conductivity screen for salinity	HOLD	pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Polycyclic Aromatic Hydrocarbons	Alkalinity (speciated)	Metals M8	Metals M8 filtered	BTEX	Eurofins | mgt Suite B15	Major Anions	Major Cations	Volatile Organics	Moisture Set	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7 (filtered metals)	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
External Laboratory																									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																				
1	MW01	Jan 08, 2020		Water	S20-Ja04468			X	X		X	X		X				X	X	X	X			X	
2	MW02	Jan 08, 2020		Water	S20-Ja04469			X	X		X	X		X				X	X	X	X			X	
3	MW03	Jan 08, 2020		Water	S20-Ja04470			X	X		X	X		X				X	X	X	X			X	
4	MW04	Jan 08, 2020		Water	S20-Ja04471			X	X		X	X		X				X	X	X	X			X	
5	MW05	Jan 08, 2020		Water	S20-Ja04472			X	X		X	X		X				X	X	X	X			X	
6	MW08	Jan 08, 2020		Water	S20-Ja04473			X	X		X	X		X				X	X	X	X			X	
7	DUP-01	Jan 08, 2020		Water	S20-Ja04474											X									
8	TRIP SPIKE	Jan 08, 2020		Soil	S20-Ja04475												X								
9	TRIP SPIKE LAB	Jan 08, 2020		Soil	S20-Ja04476												X								

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILLPERRA
Project ID: 9996

Order No.:
Report #: 696041
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 9, 2020 5:44 PM
Due: Jan 16, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	CANCELLED	Conductivity (at 25°C)	Conductivity screen for salinity	HOLD	pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Polycyclic Aromatic Hydrocarbons	Alkalinity (speciated)	Metals M8	Metals M8 filtered	BTEX	Eurofins | mgt Suite B15	Major Anions	Major Cations	Volatile Organics	Moisture Set	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7 (filtered metals)	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
10	TRIP BLANK	Jan 08, 2020		Soil	S20-Ja04477												X								
11	BH24-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04478	X												X				X			X
12	BH27-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04479	X																X	X		
13	BH39-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04480	X												X				X			X
14	BH40-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04481	X																X	X		
15	BH41-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04482	X												X				X			X
16	BH42-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04483	X																X	X		
17	BH43-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04484	X												X				X			X
18	BH44-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04485	X																X	X		
19	BH45-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04486	X												X				X			X
20	BH45-0.2-0.4	Jan 09, 2020		Soil	S20-Ja04487	X																X	X		
21	BH46-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04488	X																X	X		
22	BH47-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04489	X												X				X			X

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Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
23	BH48-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04490	X																X	X		
24	BH48-0.5-0.7	Jan 09, 2020		Soil	S20-Ja04491	X																X	X		
25	BH49-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04492	X												X				X			X
26	BH54-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04493	X												X				X			X
27	BH63-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04494	X																X	X		
28	BH98-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04495	X												X				X			X
29	BH99-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04496	X																X	X		
30	BH99-0.2-0.4	Jan 09, 2020		Soil	S20-Ja04497	X																X	X		
31	BH102-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04498	X												X				X			X
32	DUP-05	Jan 09, 2020		Soil	S20-Ja04499								X		X							X			
33	DUP-06	Jan 09, 2020		Soil	S20-Ja04500								X		X							X			
34	TRIP SPIKE	Jan 09, 2020		Soil	S20-Ja04501												X								
35	TRIP SPIKE	Jan 09, 2020		Soil	S20-Ja04502												X								

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Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
	LAB																								
36	TRIP BLANK	Jan 09, 2020		Soil	S20-Ja04503												X								
37	BH45-0.4-0.6	Jan 09, 2020		Soil	S20-Ja04504					X															
38	BH48-0.7-0.9	Jan 09, 2020		Soil	S20-Ja04505					X															
39	BH49-0.7-0.9	Jan 09, 2020		Soil	S20-Ja04506					X															
40	BH63-0.3-0.5	Jan 09, 2020		Soil	S20-Ja04507					X															
41	BH98-0.5-0.7	Jan 09, 2020		Soil	S20-Ja04508					X															
42	BH99-0.8-1.0	Jan 09, 2020		Soil	S20-Ja04509					X															
43	BH102-0.3-0.5	Jan 09, 2020		Soil	S20-Ja04510					X															
44	MW06	Jan 08, 2020		Water	S20-Ja04511		X																		
45	MW07	Jan 08, 2020		Water	S20-Ja04512		X																		
46	BH90-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04513	X												X				X			X
47	BH90-0.5-0.7	Jan 08, 2020		Soil	S20-Ja04514					X															

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Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
48	BH91-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04515	X																X	X		
49	BH91-0.9-1.1	Jan 08, 2020		Soil	S20-Ja04516					X															
50	BH95-0.0-0.2	Jan 08, 2020		Soil	S20-Ja04517	X												X				X	X		X
51	BH95-0.5-0.7	Jan 08, 2020		Soil	S20-Ja04518					X															
52	BH96-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04519	X																X	X		
Test Counts						25	2	6	6	10	6	6	2	6	2	1	6	18	6	6	6	27	14	6	12

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							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	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							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1221	mg/L	< 0.001			0.001	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB*	mg/L	< 0.001			0.001	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Conductivity (at 25°C)	uS/cm	< 10			10	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nitrate (as N)	mg/L	< 0.02			0.02	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	91			70-130	Pass	
TRH C10-C14	%	128			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	99			70-130	Pass	
Toluene	%	92			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
o-Xylene	%	103			70-130	Pass	
Xylenes - Total	%	101			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	96			70-130	Pass	
1.1.1-Trichloroethane	%	74			70-130	Pass	
1.2-Dichlorobenzene	%	90			70-130	Pass	
1.2-Dichloroethane	%	96			70-130	Pass	
Trichloroethene	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	95			70-130	Pass	
TRH C6-C10	%	85			70-130	Pass	
TRH >C10-C16	%	123			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	77			70-130	Pass	
Acenaphthylene	%	78			70-130	Pass	
Anthracene	%	90			70-130	Pass	
Benz(a)anthracene	%	94			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(a)pyrene	%	89			70-130	Pass	
Benzo(b&j)fluoranthene	%	85			70-130	Pass	
Benzo(g.h.i)perylene	%	113			70-130	Pass	
Benzo(k)fluoranthene	%	80			70-130	Pass	
Chrysene	%	89			70-130	Pass	
Dibenz(a.h)anthracene	%	119			70-130	Pass	
Fluoranthene	%	91			70-130	Pass	
Fluorene	%	81			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	118			70-130	Pass	
Naphthalene	%	73			70-130	Pass	
Phenanthrene	%	84			70-130	Pass	
Pyrene	%	89			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	84			70-130	Pass	
4.4'-DDD	%	100			70-130	Pass	
4.4'-DDE	%	86			70-130	Pass	
4.4'-DDT	%	117			70-130	Pass	
a-BHC	%	85			70-130	Pass	
Aldrin	%	81			70-130	Pass	
b-BHC	%	87			70-130	Pass	
d-BHC	%	88			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	86			70-130	Pass	
Endosulfan II	%	95			70-130	Pass	
Endosulfan sulphate	%	128			70-130	Pass	
Endrin	%	112			70-130	Pass	
Endrin ketone	%	99			70-130	Pass	
g-BHC (Lindane)	%	82			70-130	Pass	
Heptachlor	%	74			70-130	Pass	
Heptachlor epoxide	%	75			70-130	Pass	
Hexachlorobenzene	%	78			70-130	Pass	
Methoxychlor	%	105			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	116			70-130	Pass	
Dimethoate	%	109			70-130	Pass	
Ethion	%	97			70-130	Pass	
Fenitrothion	%	114			70-130	Pass	
Methyl parathion	%	113			70-130	Pass	
Mevinphos	%	116			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	87			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	106			70-130	Pass	
Conductivity (at 25°C)	%	95			70-130	Pass	
Nitrate (as N)	%	101			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	73			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	97			70-130	Pass	
Total Alkalinity (as CaCO3)	%	107			70-130	Pass	
LCS - % Recovery							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Alkali Metals									
Calcium			%	103			70-130	Pass	
Magnesium			%	106			70-130	Pass	
Potassium			%	100			70-130	Pass	
Sodium			%	109			70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic (filtered)			%	91			70-130	Pass	
Cadmium (filtered)			%	95			70-130	Pass	
Chromium (filtered)			%	93			70-130	Pass	
Copper (filtered)			%	95			70-130	Pass	
Lead (filtered)			%	92			70-130	Pass	
Mercury (filtered)			%	108			70-130	Pass	
Nickel (filtered)			%	95			70-130	Pass	
Zinc (filtered)			%	92			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
				Result 1					
Ammonia (as N)	S20-Ja03821	NCP	%	345			70-130	Fail	Q08
Nitrate (as N)	B20-Ja05010	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S20-Ja04473	CP	%	79			70-130	Pass	
Potassium	S20-Ja04473	CP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S20-Ja04474	CP	%	103			70-130	Pass	
Cadmium (filtered)	S20-Ja04474	CP	%	84			70-130	Pass	
Chromium (filtered)	S20-Ja04474	CP	%	70			70-130	Pass	
Copper (filtered)	S20-Ja04474	CP	%	61			70-130	Fail	Q08
Lead (filtered)	S20-Ja04474	CP	%	68			70-130	Fail	Q08
Mercury (filtered)	S20-Ja04474	CP	%	81			70-130	Pass	
Nickel (filtered)	S20-Ja04474	CP	%	61			70-130	Fail	Q08
Zinc (filtered)	S20-Ja04474	CP	%	56			70-130	Fail	Q08
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-Ja04468	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-Ja04468	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S20-Ja04468	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1.2.2-Tetrachloroethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S20-Ja04468	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.2-Dichloroethene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S20-Ja04468	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Ja04468	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S20-Ja04468	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S20-Ja03821	NCP	mg/L	99	93	6.0	30%	Pass	
Chloride	S20-Ja10821	NCP	mg/L	1400	1300	4.0	30%	Pass	
Nitrate (as N)	S20-Ja05510	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Sulphate (as SO4)	S20-Ja10821	NCP	mg/L	250	250	5.0	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	S20-Ja04468	CP	mg/L	17000	16000	8.0	30%	Pass	

Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M20-Ja05503	NCP	mg/L	470	450	4.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M20-Ja05503	NCP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	M20-Ja05503	NCP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M20-Ja05503	NCP	mg/L	470	460	2.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	S20-Ja04468	CP	mg/L	220	260	17	30%	Pass	
Magnesium	S20-Ja04468	CP	mg/L	850	850	<1	30%	Pass	
Potassium	S20-Ja04468	CP	mg/L	26	26	1.0	30%	Pass	
Sodium	S20-Ja04468	CP	mg/L	4800	4700	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S20-Ja05399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S20-Ja05399	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S20-Ja05399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S20-Ja05399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	S20-Ja05399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S20-Ja05399	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S20-Ja05399	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S20-Ja05399	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (at 25°C)	S20-Ja04473	CP	uS/cm	23000	25000	8.0	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
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

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Inorganic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Julie Kay	Senior Analyst-Inorganic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

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: **Sam Scully**

Report **696041-S**
Project name MILLPERRA
Project ID 9996
Received Date Jan 09, 2020

Client Sample ID			**TRIP SPIKE**	**TRIP BLANK**	**BH24-0.0-0.2**	**BH27-0.0-0.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-Ja04475**	**S20-Ja04477**	**S20-Ja04478**	**S20-Ja04479**
Date Sampled			**Jan 08, 2020**	**Jan 08, 2020**	**Jan 09, 2020**	**Jan 09, 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	< 20
TRH C15-C28	50	mg/kg	-	-	82	< 50
TRH C29-C36	50	mg/kg	-	-	86	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	168	< 50
BTEX						
Benzene	0.1	mg/kg	120	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	100	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	100	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	100	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	100	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	100	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	56	61	60	57
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	130	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	130	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			TRIP SPIKE	TRIP BLANK	BH24-0.0-0.2	BH27-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04475	S20-Ja04477	S20-Ja04478	S20-Ja04479
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	88	71
p-Terphenyl-d14 (surr.)	1	%	-	-	121	102
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	1	mg/kg	-	-	< 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	%	-	-	91	-
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			TRIP SPIKE	TRIP BLANK	BH24-0.0-0.2	BH27-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04475	S20-Ja04477	S20-Ja04478	S20-Ja04479
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 09, 2020	Jan 09, 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	%	-	-	105	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	91	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	-

Client Sample ID			TRIP SPIKE	TRIP BLANK	BH24-0.0-0.2	BH27-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04475	S20-Ja04477	S20-Ja04478	S20-Ja04479
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
2-Nitrophenol	1	mg/kg	-	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
Dinoseb	20	mg/kg	-	-	< 20	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	-
Phenol-d6 (surr.)	1	%	-	-	81	-
Heavy Metals						
Arsenic	2	mg/kg	-	-	4.4	6.8
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	11	11
Copper	5	mg/kg	-	-	18	14
Lead	5	mg/kg	-	-	29	16
Mercury	0.1	mg/kg	-	-	< 0.1	< 0.1
Nickel	5	mg/kg	-	-	8.5	6.9
Zinc	5	mg/kg	-	-	75	44
% Moisture	1	%	-	-	6.9	9.0

Client Sample ID			BH39-0.0-0.2	BH40-0.0-0.2	BH41-0.0-0.2	BH42-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04480	S20-Ja04481	S20-Ja04482	S20-Ja04483
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	67	62
TRH C29-C36	50	mg/kg	< 50	< 50	98	80
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	165	142
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	62	58	59
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

Client Sample ID			BH39-0.0-0.2	BH40-0.0-0.2	BH41-0.0-0.2	BH42-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04480	S20-Ja04481	S20-Ja04482	S20-Ja04483
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	130	110
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	130	110
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	83	88	77	93
p-Terphenyl-d14 (surr.)	1	%	116	127	108	138
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	1	mg/kg	< 1	-	< 1	-

Client Sample ID			BH39-0.0-0.2	BH40-0.0-0.2	BH41-0.0-0.2	BH42-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04480	S20-Ja04481	S20-Ja04482	S20-Ja04483
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	%	84	-	93	-
Tetrachloro-m-xylene (surr.)	1	%	100	-	77	-
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	-
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	%	139	-	129	-
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	-

Client Sample ID			BH39-0.0-0.2	BH40-0.0-0.2	BH41-0.0-0.2	BH42-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04480	S20-Ja04481	S20-Ja04482	S20-Ja04483
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	84	-	93	-
Tetrachloro-m-xylene (surr.)	1	%	100	-	77	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	-	< 5	-
Dinoseb	20	mg/kg	< 20	-	< 20	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	-
Phenol-d6 (surr.)	1	%	80	-	69	-
Heavy Metals						
Arsenic	2	mg/kg	7.2	4.9	4.8	5.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	16	13	13
Copper	5	mg/kg	22	31	21	21
Lead	5	mg/kg	30	35	26	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.9	5.2	12	13
Zinc	5	mg/kg	97	110	72	51
% Moisture	1	%	9.7	7.3	6.9	6.4

Client Sample ID			BH43-0.0-0.2	BH44-0.0-0.2	BH45-0.0-0.2	BH45-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04484	S20-Ja04485	S20-Ja04486	S20-Ja04487
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	22	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	77	98	83	< 50
TRH C29-C36	50	mg/kg	80	99	100	< 50
TRH C10-C36 (Total)	50	mg/kg	179	197	183	< 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	%	58	54	95	81
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	130	160	150	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	130	160	150	< 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	%	81	89	79	97
p-Terphenyl-d14 (surr.)	1	%	110	133	115	145

Client Sample ID			BH43-0.0-0.2	BH44-0.0-0.2	BH45-0.0-0.2	BH45-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04484	S20-Ja04485	S20-Ja04486	S20-Ja04487
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	1	mg/kg	< 1	-	< 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	%	75	-	92	-
Tetrachloro-m-xylene (surr.)	1	%	80	-	95	-
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			BH43-0.0-0.2	BH44-0.0-0.2	BH45-0.0-0.2	BH45-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04484	S20-Ja04485	S20-Ja04486	S20-Ja04487
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	%	138	-	142	-
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	%	75	-	92	-
Tetrachloro-m-xylene (surr.)	1	%	80	-	95	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	-	< 5	-
Dinoseb	20	mg/kg	< 20	-	< 20	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	-
Phenol-d6 (surr.)	1	%	71	-	71	-

Client Sample ID			BH43-0.0-0.2	BH44-0.0-0.2	BH45-0.0-0.2	BH45-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04484	S20-Ja04485	S20-Ja04486	S20-Ja04487
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	9.0	6.5	8.4	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	18	40	17	27
Copper	5	mg/kg	20	20	11	8.4
Lead	5	mg/kg	24	23	18	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.9	34	6.6	< 5
Zinc	5	mg/kg	68	76	40	62
% Moisture	1	%	6.7	4.8	11	6.2

Client Sample ID			BH46-0.0-0.2	BH47-0.0-0.2	BH48-0.0-0.2	BH48-0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04488	S20-Ja04489	S20-Ja04490	S20-Ja04491
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	68	< 50	52	< 50
TRH C29-C36	50	mg/kg	65	< 50	80	< 50
TRH C10-C36 (Total)	50	mg/kg	133	< 50	132	< 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	%	75	56	58	51
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	110	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	110	< 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

Client Sample ID			BH46-0.0-0.2	BH47-0.0-0.2	BH48-0.0-0.2	BH48-0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04488	S20-Ja04489	S20-Ja04490	S20-Ja04491
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	98	78	61	58
p-Terphenyl-d14 (surr.)	1	%	130	125	64	77
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	-	0.06	-	-
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	1	mg/kg	-	< 1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	0.06	-	-
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	%	-	95	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	107	-	-
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	-	-

Client Sample ID			BH46-0.0-0.2	BH47-0.0-0.2	BH48-0.0-0.2	BH48-0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04488	S20-Ja04489	S20-Ja04490	S20-Ja04491
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	-	146	-	-
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	%	-	95	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	107	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-

Client Sample ID			BH46-0.0-0.2	BH47-0.0-0.2	BH48-0.0-0.2	BH48-0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04488	S20-Ja04489	S20-Ja04490	S20-Ja04491
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
2-Nitrophenol	1	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Phenol-d6 (surr.)	1	%	-	70	-	-
Heavy Metals						
Arsenic	2	mg/kg	9.5	6.9	7.5	7.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	11	16	16
Copper	5	mg/kg	15	15	17	9.6
Lead	5	mg/kg	18	18	26	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	8.5	6.1
Zinc	5	mg/kg	65	36	39	25
% Moisture	1	%	9.9	5.9	7.4	6.5

Client Sample ID			BH49-0.0-0.2	BH54-0.0-0.2	BH63-0.0-0.2	BH98-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04492	S20-Ja04493	S20-Ja04494	S20-Ja04495
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	55
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	69
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	124
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	%	61	51	54	55
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

Client Sample ID			BH49-0.0-0.2	BH54-0.0-0.2	BH63-0.0-0.2	BH98-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04492	S20-Ja04493	S20-Ja04494	S20-Ja04495
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	110
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	110
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	%	86	91	92	82
p-Terphenyl-d14 (surr.)	1	%	126	136	127	113
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	0.30	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	-	< 1

Client Sample ID			BH49-0.0-0.2	BH54-0.0-0.2	BH63-0.0-0.2	BH98-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04492	S20-Ja04493	S20-Ja04494	S20-Ja04495
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.3	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.3	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	109	111	-	93
Tetrachloro-m-xylene (surr.)	1	%	128	122	-	111
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	-	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Omethoate	2	mg/kg	< 2	< 2	-	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Triphenylphosphate (surr.)	1	%	80	86	-	74
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			BH49-0.0-0.2	BH54-0.0-0.2	BH63-0.0-0.2	BH98-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04492	S20-Ja04493	S20-Ja04494	S20-Ja04495
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	109	111	-	93
Tetrachloro-m-xylene (surr.)	1	%	128	122	-	111
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	-	< 5
Dinoseb	20	mg/kg	< 20	< 20	-	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	< 20
Phenol-d6 (surr.)	1	%	84	89	-	83
Heavy Metals						
Arsenic	2	mg/kg	12	2.5	5.9	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	51	6.8	16	< 5
Copper	5	mg/kg	21	11	7.3	8.8
Lead	5	mg/kg	20	8.4	23	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	24	< 5	< 5	< 5
Zinc	5	mg/kg	39	39	26	41
% Moisture	1	%	8.2	11	5.7	8.4

Client Sample ID			BH99-0.0-0.2	BH99-0.2-0.4	BH102-0.0-0.2	DUP-05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04496	S20-Ja04497	S20-Ja04498	S20-Ja04499
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 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	%	126	66	70	-
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	< 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	%	89	100	96	94
p-Terphenyl-d14 (surr.)	1	%	118	137	134	133

Client Sample ID			BH99-0.0-0.2	BH99-0.2-0.4	BH102-0.0-0.2	DUP-05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04496	S20-Ja04497	S20-Ja04498	S20-Ja04499
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	1	mg/kg	-	-	< 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	%	-	-	92	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	115	-
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			BH99-0.0-0.2	BH99-0.2-0.4	BH102-0.0-0.2	DUP-05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04496	S20-Ja04497	S20-Ja04498	S20-Ja04499
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 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	%	-	-	85	-
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	%	-	-	92	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	115	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
2-Nitrophenol	1	mg/kg	-	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
Dinoseb	20	mg/kg	-	-	< 20	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	-
Phenol-d6 (surr.)	1	%	-	-	94	-

Client Sample ID			BH99-0.0-0.2	BH99-0.2-0.4	BH102-0.0-0.2	DUP-05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04496	S20-Ja04497	S20-Ja04498	S20-Ja04499
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 09, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	3.1	2.5	5.5	2.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.2	6.9	9.2	7.2
Copper	5	mg/kg	16	< 5	10	13
Lead	5	mg/kg	61	< 5	15	9.0
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.6	< 5	< 5	< 5
Zinc	5	mg/kg	67	5.7	35	40
% Moisture	1	%	7.8	5.7	8.2	11

Client Sample ID			DUP-06	TRIP SPIKE	TRIP BLANK	BH90-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04500	S20-Ja04501	S20-Ja04503	S20-Ja04513
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	69
TRH C29-C36	50	mg/kg	-	-	-	85
TRH C10-C36 (Total)	50	mg/kg	-	-	-	154
BTEX						
Benzene	0.1	mg/kg	-	100	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	99	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	99	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	95	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	98	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	-	96	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	117	89	74
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	120
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	120
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

Client Sample ID			DUP-06	TRIP SPIKE	TRIP BLANK	BH90-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04500	S20-Ja04501	S20-Ja04503	S20-Ja04513
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	90	-	-	97
p-Terphenyl-d14 (surr.)	1	%	126	-	-	106
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	1	mg/kg	-	-	-	< 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	%	-	-	-	126
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

Client Sample ID			DUP-06	TRIP SPIKE	TRIP BLANK	BH90-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04500	S20-Ja04501	S20-Ja04503	S20-Ja04513
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	-	-	-	126
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	%	-	-	-	126
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	122
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1

Client Sample ID			DUP-06	TRIP SPIKE	TRIP BLANK	BH90-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04500	S20-Ja04501	S20-Ja04503	S20-Ja04513
Date Sampled			Jan 09, 2020	Jan 09, 2020	Jan 09, 2020	Jan 08, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
2-Nitrophenol	1	mg/kg	-	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
4-Nitrophenol	5	mg/kg	-	-	-	< 5
Dinoseb	20	mg/kg	-	-	-	< 20
Phenol	0.5	mg/kg	-	-	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20
Phenol-d6 (surr.)	1	%	-	-	-	97
Heavy Metals						
Arsenic	2	mg/kg	< 2	-	-	7.0
Cadmium	0.4	mg/kg	< 0.4	-	-	< 0.4
Chromium	5	mg/kg	< 5	-	-	11
Copper	5	mg/kg	8.9	-	-	11
Lead	5	mg/kg	13	-	-	14
Mercury	0.1	mg/kg	< 0.1	-	-	< 0.1
Nickel	5	mg/kg	< 5	-	-	< 5
Zinc	5	mg/kg	39	-	-	40
% Moisture	1	%	7.5	-	-	8.0

Client Sample ID			BH91-0.0-0.1	BH95-0.0-0.2	BH96-0.0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04515	S20-Ja04517	S20-Ja04519
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 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	68
TRH C29-C36	50	mg/kg	54	< 50	74
TRH C10-C36 (Total)	50	mg/kg	104	< 50	142
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	%	82	76	80
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

Client Sample ID			BH91-0.0-0.1	BH95-0.0-0.2	BH96-0.0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04515	S20-Ja04517	S20-Ja04519
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	110
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	110
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	92	92	91
p-Terphenyl-d14 (surr.)	1	%	99	98	104
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	-	0.08	-
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	1	mg/kg	-	< 1	-

Client Sample ID			BH91-0.0-0.1	BH95-0.0-0.2	BH96-0.0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04515	S20-Ja04517	S20-Ja04519
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	0.08	-
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	%	-	94	-
Tetrachloro-m-xylene (surr.)	1	%	-	112	-
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	%	-	111	-
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	-

Client Sample ID			BH91-0.0-0.1	BH95-0.0-0.2	BH96-0.0-0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-Ja04515	S20-Ja04517	S20-Ja04519
Date Sampled			Jan 08, 2020	Jan 08, 2020	Jan 08, 2020
Test/Reference	LOR	Unit			
Polychlorinated Biphenyls					
Aroclor-1260	0.5	mg/kg	-	< 0.5	-
Total PCB*	0.5	mg/kg	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	94	-
Tetrachloro-m-xylene (surr.)	1	%	-	112	-
Phenols (Halogenated)					
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-
Pentachlorophenol	1	mg/kg	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-
2-Nitrophenol	1	mg/kg	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-
4-Nitrophenol	5	mg/kg	-	< 5	-
Dinoseb	20	mg/kg	-	< 20	-
Phenol	0.5	mg/kg	-	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-
Phenol-d6 (surr.)	1	%	-	97	-
Heavy Metals					
Arsenic	2	mg/kg	6.6	6.2	4.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.6	< 5	11
Copper	5	mg/kg	12	7.4	9.6
Lead	5	mg/kg	10	9.7	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	6.0
Zinc	5	mg/kg	30	26	50
% Moisture	1	%	4.6	3.7	4.5

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	Jan 13, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jan 13, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 13, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 13, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 13, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Jan 13, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Jan 13, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jan 13, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Jan 13, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Jan 13, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Jan 13, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Jan 10, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILLPERRA
Project ID: 9996

Order No.:
Report #: 696041
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 9, 2020 5:44 PM
Due: Jan 16, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	CANCELLED	Conductivity (at 25°C)	Conductivity screen for salinity	HOLD	pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Polycyclic Aromatic Hydrocarbons	Alkalinity (speciated)	Metals M8	Metals M8 filtered	BTEX	Eurofins | mgt Suite B15	Major Anions	Major Cations	Volatile Organics	Moisture Set	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7 (filtered metals)	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
External Laboratory																									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																				
1	MW01	Jan 08, 2020		Water	S20-Ja04468			X	X		X	X		X				X	X	X	X			X	
2	MW02	Jan 08, 2020		Water	S20-Ja04469			X	X		X	X		X				X	X	X	X			X	
3	MW03	Jan 08, 2020		Water	S20-Ja04470			X	X		X	X		X				X	X	X	X			X	
4	MW04	Jan 08, 2020		Water	S20-Ja04471			X	X		X	X		X				X	X	X	X			X	
5	MW05	Jan 08, 2020		Water	S20-Ja04472			X	X		X	X		X				X	X	X	X			X	
6	MW08	Jan 08, 2020		Water	S20-Ja04473			X	X		X	X		X				X	X	X	X			X	
7	DUP-01	Jan 08, 2020		Water	S20-Ja04474											X									
8	TRIP SPIKE	Jan 08, 2020		Soil	S20-Ja04475												X								
9	TRIP SPIKE LAB	Jan 08, 2020		Soil	S20-Ja04476												X								

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILLPERRA
Project ID: 9996

Order No.:
Report #: 696041
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 9, 2020 5:44 PM
Due: Jan 16, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	CANCELLED	Conductivity (at 25°C)	Conductivity screen for salinity	HOLD	pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Polycyclic Aromatic Hydrocarbons	Alkalinity (speciated)	Metals M8	Metals M8 filtered	BTEX	Eurofins | mgt Suite B15	Major Anions	Major Cations	Volatile Organics	Moisture Set	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7 (filtered metals)	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
10	TRIP BLANK	Jan 08, 2020		Soil	S20-Ja04477												X								
11	BH24-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04478	X												X				X			X
12	BH27-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04479	X																X	X		
13	BH39-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04480	X												X				X			X
14	BH40-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04481	X																X	X		
15	BH41-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04482	X												X				X			X
16	BH42-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04483	X																X	X		
17	BH43-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04484	X												X				X			X
18	BH44-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04485	X																X	X		
19	BH45-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04486	X												X				X			X
20	BH45-0.2-0.4	Jan 09, 2020		Soil	S20-Ja04487	X																X	X		
21	BH46-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04488	X																X	X		
22	BH47-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04489	X												X				X			X

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Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
23	BH48-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04490	X																X	X		
24	BH48-0.5-0.7	Jan 09, 2020		Soil	S20-Ja04491	X																X	X		
25	BH49-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04492	X												X				X			X
26	BH54-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04493	X												X				X			X
27	BH63-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04494	X																X	X		
28	BH98-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04495	X												X				X			X
29	BH99-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04496	X																X	X		
30	BH99-0.2-0.4	Jan 09, 2020		Soil	S20-Ja04497	X																X	X		
31	BH102-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04498	X												X				X			X
32	DUP-05	Jan 09, 2020		Soil	S20-Ja04499								X		X							X			
33	DUP-06	Jan 09, 2020		Soil	S20-Ja04500								X		X							X			
34	TRIP SPIKE	Jan 09, 2020		Soil	S20-Ja04501												X								
35	TRIP SPIKE	Jan 09, 2020		Soil	S20-Ja04502												X								

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Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
	LAB																								
36	TRIP BLANK	Jan 09, 2020		Soil	S20-Ja04503												X								
37	BH45-0.4-0.6	Jan 09, 2020		Soil	S20-Ja04504					X															
38	BH48-0.7-0.9	Jan 09, 2020		Soil	S20-Ja04505					X															
39	BH49-0.7-0.9	Jan 09, 2020		Soil	S20-Ja04506					X															
40	BH63-0.3-0.5	Jan 09, 2020		Soil	S20-Ja04507					X															
41	BH98-0.5-0.7	Jan 09, 2020		Soil	S20-Ja04508					X															
42	BH99-0.8-1.0	Jan 09, 2020		Soil	S20-Ja04509					X															
43	BH102-0.3-0.5	Jan 09, 2020		Soil	S20-Ja04510					X															
44	MW06	Jan 08, 2020		Water	S20-Ja04511		X																		
45	MW07	Jan 08, 2020		Water	S20-Ja04512		X																		
46	BH90-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04513	X												X				X			X
47	BH90-0.5-0.7	Jan 08, 2020		Soil	S20-Ja04514					X															

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Melbourne Laboratory - NATA Site # 1254 & 14271														X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																									
Perth Laboratory - NATA Site # 23736																									
48	BH91-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04515	X																X	X		
49	BH91-0.9-1.1	Jan 08, 2020		Soil	S20-Ja04516					X															
50	BH95-0.0-0.2	Jan 08, 2020		Soil	S20-Ja04517	X												X				X	X		X
51	BH95-0.5-0.7	Jan 08, 2020		Soil	S20-Ja04518					X															
52	BH96-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04519	X																X	X		
Test Counts						25	2	6	6	10	6	6	2	6	2	1	6	18	6	6	6	27	14	6	12

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	< 1			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							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	86			70-130	Pass	
TRH C10-C14	%	75			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	83			70-130	Pass	
Toluene	%	85			70-130	Pass	
Ethylbenzene	%	82			70-130	Pass	
m&p-Xylenes	%	77			70-130	Pass	
o-Xylene	%	83			70-130	Pass	
Xylenes - Total	%	79			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	75			70-130	Pass	
TRH C6-C10	%	82			70-130	Pass	
TRH >C10-C16	%	74			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	92			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	101			70-130	Pass	
Benz(a)anthracene	%	96			70-130	Pass	
Benzo(a)pyrene	%	102			70-130	Pass	
Benzo(b&j)fluoranthene	%	130			70-130	Pass	
Benzo(g.h.i)perylene	%	85			70-130	Pass	
Benzo(k)fluoranthene	%	110			70-130	Pass	
Chrysene	%	82			70-130	Pass	
Dibenz(a.h)anthracene	%	90			70-130	Pass	
Fluoranthene	%	129			70-130	Pass	
Fluorene	%	93			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	90			70-130	Pass	
Naphthalene	%	110			70-130	Pass	
Phenanthrene	%	72			70-130	Pass	
Pyrene	%	128			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	101			70-130	Pass	
4.4'-DDD	%	103			70-130	Pass	
4.4'-DDE	%	94			70-130	Pass	
4.4'-DDT	%	98			70-130	Pass	
a-BHC	%	112			70-130	Pass	
Aldrin	%	104			70-130	Pass	
b-BHC	%	103			70-130	Pass	
d-BHC	%	106			70-130	Pass	
Dieldrin	%	98			70-130	Pass	
Endosulfan I	%	101			70-130	Pass	
Endosulfan II	%	91			70-130	Pass	
Endosulfan sulphate	%	90			70-130	Pass	
Endrin	%	99			70-130	Pass	
Endrin aldehyde	%	92			70-130	Pass	
Endrin ketone	%	83			70-130	Pass	
g-BHC (Lindane)	%	107			70-130	Pass	
Heptachlor	%	104			70-130	Pass	
Heptachlor epoxide	%	107			70-130	Pass	
Hexachlorobenzene	%	105			70-130	Pass	
Methoxychlor	%	96			70-130	Pass	
Toxaphene	%	84			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	102			70-130	Pass	
Dimethoate	%	95			70-130	Pass	
Ethion	%	99			70-130	Pass	
Fenitrothion	%	104			70-130	Pass	
Methyl parathion	%	126			70-130	Pass	
Mevinphos	%	102			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	76			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	103			30-130	Pass	
2.4-Dichlorophenol	%	82			30-130	Pass	
2.4.5-Trichlorophenol	%	76			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.6-Trichlorophenol	%	82			30-130	Pass	
2.6-Dichlorophenol	%	95			30-130	Pass	
4-Chloro-3-methylphenol	%	102			30-130	Pass	
Pentachlorophenol	%	72			30-130	Pass	
Tetrachlorophenols - Total	%	82			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	90			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	98			30-130	Pass	
2-Methylphenol (o-Cresol)	%	93			30-130	Pass	
2-Nitrophenol	%	97			30-130	Pass	
2.4-Dimethylphenol	%	88			30-130	Pass	
2.4-Dinitrophenol	%	74			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	101			30-130	Pass	
4-Nitrophenol	%	95			30-130	Pass	
Dinoseb	%	74			30-130	Pass	
Phenol	%	115			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			70-130	Pass	
Cadmium	%	92			70-130	Pass	
Chromium	%	97			70-130	Pass	
Copper	%	96			70-130	Pass	
Lead	%	92			70-130	Pass	
Mercury	%	94			70-130	Pass	
Nickel	%	96			70-130	Pass	
Zinc	%	96			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Ja01972	NCP	%	97			70-130	Pass	
Toluene	S20-Ja01972	NCP	%	89			70-130	Pass	
Ethylbenzene	S20-Ja01972	NCP	%	83			70-130	Pass	
m&p-Xylenes	S20-Ja01972	NCP	%	83			70-130	Pass	
o-Xylene	S20-Ja01972	NCP	%	83			70-130	Pass	
Xylenes - Total	S20-Ja01972	NCP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S20-Ja01972	NCP	%	82			70-130	Pass	
TRH C10-C14	S20-Ja02683	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Ja01972	NCP	%	70			70-130	Pass	
TRH C6-C10	S20-Ja01972	NCP	%	82			70-130	Pass	
TRH >C10-C16	S20-Ja02683	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-Ja02686	NCP	%	96			70-130	Pass	
4.4'-DDD	S20-Ja02686	NCP	%	116			70-130	Pass	
4.4'-DDE	S20-Ja02686	NCP	%	92			70-130	Pass	
4.4'-DDT	S20-Ja02563	NCP	%	75			70-130	Pass	
a-BHC	S20-Ja02686	NCP	%	109			70-130	Pass	
Aldrin	S20-Ja02686	NCP	%	104			70-130	Pass	
b-BHC	S20-Ja02686	NCP	%	106			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
d-BHC	S20-Ja02686	NCP	%	109			70-130	Pass	
Dieldrin	S20-Ja02686	NCP	%	98			70-130	Pass	
Endosulfan I	S20-Ja02686	NCP	%	100			70-130	Pass	
Endosulfan II	S20-Ja02686	NCP	%	88			70-130	Pass	
Endosulfan sulphate	S20-Ja02686	NCP	%	84			70-130	Pass	
Endrin	S20-Ja02686	NCP	%	96			70-130	Pass	
Endrin aldehyde	S20-Ja02686	NCP	%	87			70-130	Pass	
Endrin ketone	S20-Ja02686	NCP	%	75			70-130	Pass	
g-BHC (Lindane)	S20-Ja02686	NCP	%	106			70-130	Pass	
Heptachlor	S20-Ja02686	NCP	%	96			70-130	Pass	
Heptachlor epoxide	S20-Ja02686	NCP	%	106			70-130	Pass	
Hexachlorobenzene	S20-Ja02686	NCP	%	105			70-130	Pass	
Methoxychlor	S20-Ja02563	NCP	%	74			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ja04482	CP	%	102			70-130	Pass	
Cadmium	S20-Ja04482	CP	%	105			70-130	Pass	
Chromium	S20-Ja04482	CP	%	97			70-130	Pass	
Copper	S20-Ja04482	CP	%	94			70-130	Pass	
Lead	S20-Ja04482	CP	%	90			70-130	Pass	
Mercury	S20-Ja04482	CP	%	101			70-130	Pass	
Nickel	S20-Ja04482	CP	%	95			70-130	Pass	
Zinc	S20-Ja04482	CP	%	85			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	S20-Ja04489	CP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Ja04500	CP	%	92			70-130	Pass	
Cadmium	S20-Ja04500	CP	%	94			70-130	Pass	
Chromium	S20-Ja04500	CP	%	90			70-130	Pass	
Copper	S20-Ja04500	CP	%	91			70-130	Pass	
Lead	S20-Ja04500	CP	%	88			70-130	Pass	
Mercury	S20-Ja04500	CP	%	93			70-130	Pass	
Nickel	S20-Ja04500	CP	%	88			70-130	Pass	
Zinc	S20-Ja04500	CP	%	99			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-Ja07240	NCP	%	80			70-130	Pass	
Acenaphthylene	S20-Ja07240	NCP	%	92			70-130	Pass	
Anthracene	S20-Ja07240	NCP	%	97			70-130	Pass	
Benz(a)anthracene	S20-Ja07323	NCP	%	109			70-130	Pass	
Benzo(a)pyrene	S20-Ja07240	NCP	%	130			70-130	Pass	
Benzo(b&j)fluoranthene	S20-Ja07240	NCP	%	102			70-130	Pass	
Benzo(g.h.i)perylene	S20-Ja07240	NCP	%	110			70-130	Pass	
Benzo(k)fluoranthene	S20-Ja07240	NCP	%	95			70-130	Pass	
Chrysene	S20-Ja07240	NCP	%	109			70-130	Pass	
Dibenz(a.h)anthracene	S20-Ja07240	NCP	%	122			70-130	Pass	
Fluoranthene	S20-Ja07323	NCP	%	108			70-130	Pass	
Fluorene	S20-Ja07240	NCP	%	90			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-Ja07240	NCP	%	121			70-130	Pass	
Naphthalene	S20-Ja07240	NCP	%	92			70-130	Pass	
Phenanthrene	S20-Ja07240	NCP	%	119			70-130	Pass	
Pyrene	S20-Ja07323	NCP	%	97			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ja09534	NCP	%	83			70-130	Pass	
Dimethoate	M20-Ja09534	NCP	%	75			70-130	Pass	
Ethion	M20-Ja09534	NCP	%	95			70-130	Pass	
Fenitrothion	M20-Ja09534	NCP	%	87			70-130	Pass	
Methyl parathion	M20-Ja09534	NCP	%	111			70-130	Pass	
Mevinphos	M20-Ja09534	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2.4.5-Trichlorophenol	S20-Ja08534	NCP	%	116			30-130	Pass	
2.4.6-Trichlorophenol	S20-Ja08534	NCP	%	84			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methyl-4.6-dinitrophenol	S20-Ja08534	NCP	%	125			30-130	Pass	
2-Nitrophenol	S20-Ja08534	NCP	%	125			30-130	Pass	
4-Nitrophenol	S20-Ja08534	NCP	%	92			30-130	Pass	
Phenol	S20-Ja08534	NCP	%	78			30-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Ja01971	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-Ja01971	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-Ja01971	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-Ja01971	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-Ja01971	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S20-Ja01971	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-Ja01971	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-Ja02682	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-Ja02682	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-Ja02682	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Ja01971	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-Ja01971	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-Ja02682	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-Ja02682	NCP	mg/kg	< 100		<1	30%	Pass	
TRH >C34-C40	S20-Ja02682	NCP	mg/kg	< 100		3.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Indeno(1.2.3-cd)pyrene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-Ja04252	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-Ja02561	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-Ja04126	NCP	mg/kg	0.14	0.09	40	30%	Fail	Q02
Endosulfan I	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-Ja02561	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-Ja02561	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S20-Ja02561	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-Ja03696	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-Ja03696	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Omethoate	S20-Ja03696	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-Ja03696	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S20-Ja04126	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S20-Ja04126	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S20-Ja04126	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S20-Ja04126	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S20-Ja04126	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S20-Ja04126	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S20-Ja04126	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ja04481	CP	mg/kg	4.9	3.7	27	30%	Pass	
Cadmium	S20-Ja04481	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja04481	CP	mg/kg	16	11	30	30%	Pass	
Copper	S20-Ja04481	CP	mg/kg	31	31	1.0	30%	Pass	
Lead	S20-Ja04481	CP	mg/kg	35	37	5.0	30%	Pass	
Mercury	S20-Ja04481	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja04481	CP	mg/kg	5.2	7.0	30	30%	Pass	
Zinc	S20-Ja04481	CP	mg/kg	110	110	7.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-Ja04481	CP	%	7.3	7.2	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ja04491	CP	mg/kg	7.3	7.8	7.0	30%	Pass	
Cadmium	S20-Ja04491	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja04491	CP	mg/kg	16	17	7.0	30%	Pass	
Copper	S20-Ja04491	CP	mg/kg	9.6	10	8.0	30%	Pass	
Lead	S20-Ja04491	CP	mg/kg	17	17	2.0	30%	Pass	
Mercury	S20-Ja04491	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja04491	CP	mg/kg	6.1	6.0	2.0	30%	Pass	
Zinc	S20-Ja04491	CP	mg/kg	25	25	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-Ja04491	CP	%	6.5	6.7	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ja04498	CP	mg/kg	5.5	5.6	2.0	30%	Pass	
Cadmium	S20-Ja04498	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja04498	CP	mg/kg	9.2	9.2	<1	30%	Pass	
Copper	S20-Ja04498	CP	mg/kg	10	11	7.0	30%	Pass	
Lead	S20-Ja04498	CP	mg/kg	15	15	<1	30%	Pass	
Mercury	S20-Ja04498	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja04498	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-Ja04498	CP	mg/kg	35	35	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Ja04499	CP	mg/kg	2.7	2.8	3.0	30%	Pass	
Cadmium	S20-Ja04499	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-Ja04499	CP	mg/kg	7.2	7.0	3.0	30%	Pass	
Copper	S20-Ja04499	CP	mg/kg	13	14	12	30%	Pass	
Lead	S20-Ja04499	CP	mg/kg	9.0	12	29	30%	Pass	
Mercury	S20-Ja04499	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-Ja04499	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-Ja04499	CP	mg/kg	40	45	12	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-Ja04519	CP	%	4.5	4.3	3.0	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
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause

Authorised By

Andrew Black	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.

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Certificate of Analysis

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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.

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

Attention:	Sam Scully
Report	696041-AID
Project Name	MILLPERRA
Project ID	9996
Received Date	Jan 09, 2020
Date Reported	Jan 16, 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 MILLPERRA
Project ID 9996
Date Sampled Jan 08, 2020 to Jan 09, 2020
Report 696041-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH24-0.0-0.2	20-Ja04478	Jan 09, 2020	Approximate Sample 566g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH27-0.0-0.2	20-Ja04479	Jan 09, 2020	Approximate Sample 897g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH39-0.0-0.2	20-Ja04480	Jan 09, 2020	Approximate Sample 540g Sample consisted of: Brown coarse-grained soil and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragment. Approximate raw weight of FA = 0.77g Estimated asbestos content in FA = 0.23g* Total estimated asbestos concentration in FA = 0.043% w/w* Organic fibre detected. No trace asbestos detected.
BH40-0.0-0.2	20-Ja04481	Jan 09, 2020	Approximate Sample 513g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH41-0.0-0.2	20-Ja04482	Jan 09, 2020	Approximate Sample 538g Sample consisted of: Brown coarse-grained soil, cement, bituminous material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH42-0.0-0.2	20-Ja04483	Jan 09, 2020	Approximate Sample 636g Sample consisted of: Brown coarse-grained clayey soil, bituminous material, cement, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH43-0.0-0.2	20-Ja04484	Jan 09, 2020	Approximate Sample 436g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH44-0.0-0.2	20-Ja04485	Jan 09, 2020	Approximate Sample 1016g Sample consisted of: Brown coarse-grained soil, bituminous material, cement, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH45-0.0-0.2	20-Ja04486	Jan 09, 2020	Approximate Sample 780g Sample consisted of: Brown coarse-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH45-0.2-0.4	20-Ja04487	Jan 09, 2020	Approximate Sample 588g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH46-0.0-0.2	20-Ja04488	Jan 09, 2020	Approximate Sample 413g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH47-0.0-0.2	20-Ja04489	Jan 09, 2020	Approximate Sample 879g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH48-0.0-0.2	20-Ja04490	Jan 09, 2020	Approximate Sample 933g Sample consisted of: Brown coarse-grained soil, bituminous material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH48-0.5-0.7	20-Ja04491	Jan 09, 2020	Approximate Sample 878g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH49-0.0-0.2	20-Ja04492	Jan 09, 2020	Approximate Sample 674g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH54-0.0-0.2	20-Ja04493	Jan 09, 2020	Approximate Sample 445g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH63-0.0-0.2	20-Ja04494	Jan 09, 2020	Approximate Sample 644g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH98-0.0-0.2	20-Ja04495	Jan 09, 2020	Approximate Sample 699g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH99-0.0-0.2	20-Ja04496	Jan 09, 2020	Approximate Sample 552g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH99-0.2-0.4	20-Ja04497	Jan 09, 2020	Approximate Sample 945g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH102-0.0-0.2	20-Ja04498	Jan 09, 2020	Approximate Sample 760g Sample consisted of: Brown coarse-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH90-0.0-0.1	20-Ja04513	Jan 08, 2020	Approximate Sample 747g Sample consisted of: Brown coarse-grained clayey soil, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH91-0.0-0.1	20-Ja04515	Jan 08, 2020	Approximate Sample 725g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH95-0.0-0.2	20-Ja04517	Jan 08, 2020	Approximate Sample 619g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH96-0.0-0.1	20-Ja04519	Jan 08, 2020	Approximate Sample 656g Sample consisted of: Brown coarse-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% 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	Jan 10, 2020	Indefinite

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILLPERRA
Project ID: 9996

Order No.:
Report #: 696041
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 9, 2020 5:44 PM
Due: Jan 16, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	CANCELLED	Conductivity (at 25°C)	HOLD	pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Polycyclic Aromatic Hydrocarbons	Alkalinity (speciated)	Metals M8	Metals M8 filtered	BTEX	Eurofins | mgt Suite B15	Major Anions	Major Cations	Volatile Organics	Moisture Set	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7 (filtered metals)	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271													X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																								
Perth Laboratory - NATA Site # 23736																								
External Laboratory																								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																			
1	MW01	Jan 08, 2020		Water	S20-Ja04468			X		X	X		X				X	X	X	X			X	
2	MW02	Jan 08, 2020		Water	S20-Ja04469			X		X	X		X				X	X	X	X			X	
3	MW03	Jan 08, 2020		Water	S20-Ja04470			X		X	X		X				X	X	X	X			X	
4	MW04	Jan 08, 2020		Water	S20-Ja04471			X		X	X		X				X	X	X	X			X	
5	MW05	Jan 08, 2020		Water	S20-Ja04472			X		X	X		X				X	X	X	X			X	
6	MW08	Jan 08, 2020		Water	S20-Ja04473			X		X	X		X				X	X	X	X			X	
7	DUP-01	Jan 08, 2020		Water	S20-Ja04474										X									
8	TRIP SPIKE	Jan 08, 2020		Soil	S20-Ja04475											X								
9	TRIP BLANK	Jan 08, 2020		Soil	S20-Ja04477											X								
10	BH24-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04478	X											X				X			X

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
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Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	CANCELLED	Conductivity (at 25°C)	HOLD	pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Polycyclic Aromatic Hydrocarbons	Alkalinity (speciated)	Metals M8	Metals M8 filtered	BTEX	Eurofins | mgt Suite B15	Major Anions	Major Cations	Volatile Organics	Moisture Set	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7 (filtered metals)	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271													X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																								
Perth Laboratory - NATA Site # 23736																								
11	BH27-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04479	X															X	X		
12	BH39-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04480	X											X				X			X
13	BH40-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04481	X															X	X		
14	BH41-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04482	X											X				X			X
15	BH42-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04483	X															X	X		
16	BH43-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04484	X											X				X			X
17	BH44-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04485	X															X	X		
18	BH45-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04486	X											X				X			X
19	BH45-0.2-0.4	Jan 09, 2020		Soil	S20-Ja04487	X															X	X		
20	BH46-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04488	X															X	X		
21	BH47-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04489	X											X				X			X
22	BH48-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04490	X															X	X		
23	BH48-0.5-0.7	Jan 09, 2020		Soil	S20-Ja04491	X															X	X		

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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Brisbane
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Murarrie QLD 4172
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Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILLPERRA
Project ID: 9996

Order No.:
Report #: 696041
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jan 9, 2020 5:44 PM
Due: Jan 16, 2020
Priority: 5 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	CANCELLED	Conductivity (at 25°C)	HOLD	pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Polycyclic Aromatic Hydrocarbons	Alkalinity (speciated)	Metals M8	Metals M8 filtered	BTEX	Eurofins | mgt Suite B15	Major Anions	Major Cations	Volatile Organics	Moisture Set	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7 (filtered metals)	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271													X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																								
Perth Laboratory - NATA Site # 23736																								
24	BH49-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04492	X											X				X			X
25	BH54-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04493	X											X				X			X
26	BH63-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04494	X															X	X		
27	BH98-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04495	X											X				X			X
28	BH99-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04496	X															X	X		
29	BH99-0.2-0.4	Jan 09, 2020		Soil	S20-Ja04497	X															X	X		
30	BH102-0.0-0.2	Jan 09, 2020		Soil	S20-Ja04498	X											X				X			X
31	DUP-05	Jan 09, 2020		Soil	S20-Ja04499							X		X							X			
32	DUP-06	Jan 09, 2020		Soil	S20-Ja04500							X		X							X			
33	TRIP SPIKE	Jan 09, 2020		Soil	S20-Ja04501											X								
34	TRIP BLANK	Jan 09, 2020		Soil	S20-Ja04503											X								
35	BH45-0.4-0.6	Jan 09, 2020		Soil	S20-Ja04504				X															
36	BH48-0.7-0.9	Jan 09, 2020		Soil	S20-Ja04505				X															

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Melbourne Laboratory - NATA Site # 1254 & 14271													X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																								
Perth Laboratory - NATA Site # 23736																								
37	BH49-0.7-0.9	Jan 09, 2020		Soil	S20-Ja04506				X															
38	BH63-0.3-0.5	Jan 09, 2020		Soil	S20-Ja04507				X															
39	BH98-0.5-0.7	Jan 09, 2020		Soil	S20-Ja04508				X															
40	BH99-0.8-1.0	Jan 09, 2020		Soil	S20-Ja04509				X															
41	BH102-0.3-0.5	Jan 09, 2020		Soil	S20-Ja04510				X															
42	MW06	Jan 08, 2020		Water	S20-Ja04511		X																	
43	MW07	Jan 08, 2020		Water	S20-Ja04512		X																	
44	BH90-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04513	X											X				X			X
45	BH90-0.5-0.7	Jan 08, 2020		Soil	S20-Ja04514				X															
46	BH91-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04515	X															X	X		
47	BH91-0.9-1.1	Jan 08, 2020		Soil	S20-Ja04516				X															
48	BH95-0.0-0.2	Jan 08, 2020		Soil	S20-Ja04517	X											X				X	X		X
49	BH95-0.5-0.7	Jan 08, 2020		Soil	S20-Ja04518				X															

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Melbourne Laboratory - NATA Site # 1254 & 14271													X					X						
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																								
Perth Laboratory - NATA Site # 23736																								
50	BH96-0.0-0.1	Jan 08, 2020		Soil	S20-Ja04519	X															X	X		
Test Counts						25	2	6	10	6	6	2	6	2	1	4	18	6	6	6	27	14	6	12

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

S20-Ja04484, S20-Ja04488, S20-Ja04493: Samples received were less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

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:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

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.

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ Sydney Laboratory
Unit F3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	Sam Scully	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name		EDD Format (ESdat, EQuIS, Custom)	
Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Sc ully
Handed over by	
Email for Invoice	admin@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	Inorganic compounds	BTEX	PAH	8 Metals	VOCs	OCP/OPP	PCB	TRH
1	MW01	8/01/19	Water	X	X	X	X	X	X	X	X
2	MW02	8/01/19	Water	X	X	X	X	X	X	X	X
3	MW03	8/01/19	Water	X	X	X	X	X	X	X	X
4	MW04	8/01/19	Water	X	X	X	X	X	X	X	X
5	MW05	8/01/19	Water	X	X	X	X	X	X	X	X
6	MW06	8/01/19	Water	X	X	X	X	X	X	X	X
7	MW07	8/01/19	Water	X	X	X	X	X	X	X	X
8	MW08	8/01/19	Water	X	X	X	X	X	X	X	X
9	Dup-01	8/01/19	Water				X				
	Dup-1A	8/01/19	Water				X				
	Trip Spike	8/01/19	Water		X						
10	Trip Blank	8/01/19	Water		X						
	Total Counts										

Containers

1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other Asbestos AS4964 (WA Guidelines)

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

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

Sample Comments / Dangerous Goods Hazard Warning

Please forward to ALS

Method of Shipment	☐ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date	9-1-20 Time
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	9/1/2020 Time	Temperature 11.3°C
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report № 696044

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

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☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
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Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

| | | | | |

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Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	
Email for Invoice	admin@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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- ☐ 3 Day* ☒ 5 Day
- * Surcharges apply
- ☐ Other ( )

Analyses (Please mark the analysis required below. Where multiple tests are required for one sample, please list in the order to be performed.)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	CEC/pH	BTEX	PAH	8 Metals	OCP/OPP	PCB	Phenols	Asbestos (0.001%)	TRH	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	BH45-0.4-0.6	9/01/20	Soil											
2	BH46-0.0-0.2	9/01/20	Soil		X	X	X				X	X		
3	BH47-0.0-0.2	9/01/20	Soil		X	X	X	X	X	X	X	X		
4	BH48-0.0-0.2	9/01/20	Soil		X	X	X				X	X		
5	BH48-0.5-0.7	9/01/20	Soil		X	X	X				X	X		
6	BH48-0.7-0.9	9/01/20	Soil											
7	BH49-0.0-0.2	9/01/20	Soil		X	X	X	X	X	X	X	X		
8	BH49-0.7-0.9	9/01/20	Soil											
9	BH54-0.0-0.2	9/01/20	Soil		X	X	X	X	X	X	X	X		
10	BH63-0.0-0.2	9/01/20	Soil		X	X	X				X	X		
	Total Counts													

Method of Shipment	☐ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date 9/01/2020 Time
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date 9/1/2020	Time 5:44PM	Temperature 11.3°C	
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report № 696041	

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

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

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- ☐ 3 Day* ☒ 5 Day
- * Surcharges apply
- ☐ Other ( )

Sample Comments / Dangerous Goods Hazard Warning

Analyses: CEC/pH; BTEX; PAH; 8 Metals; OCP/OPP; PCB; Phenols; Asbestos (0.001%); TRH; Hold

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	CEC/pH	BTEX	PAH	8 Metals	OCP/OPP	PCB	Phenols	Asbestos (0.001%)	TRH	Hold
1	BH63-0.3-0.5	9/01/20	Soil										
2	BH90-0.0-0.1	8/01/20	Soil		X	X	X	X	X	X	X	X	
3	BH90-0.5-0.7	8/01/20	Soil										
4	BH91-0.0-0.1	8/01/20	Soil		X	X	X				X	X	
5	BH91-0.9-1.1	8/01/20	Soil										
6	BH95-0.0-0.2	8/01/20	Soil		X	X	X	X	X	X	X	X	
7	BH95-0.5-0.7	8/01/20	Soil										
8	BH96-0.0-0.1	8/01/20	Soil		X	X	X				X	X	
9	BH98-0.0-0.2	9/01/20	Soil		X	X	X	X	X	X	X	X	
10	BH98-0.5-0.7	9/01/20	Soil										
	Total Counts												

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal | Name: Sam Scully | Signature | Date: 9/01/2020 | Time

Eurofins | mgt Laboratory Use Only

Received By	Lyanne Ford	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date: 9/1/2020	Time: 5:40pm	Temperature: 11.3°C
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date: __/__/__	Time: __:__	Report № 696041

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

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ Sydney Laboratory
Unit F3 Bld F, 16 Mars Rd, Lane Cove West, NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name					
Phone №					
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully				
Handed over by					
Email for Invoice	admin@allgeo.com.au				
Email for Results	Enviro@allgeo.com.au				

Analyses (Note: Where "metals" are requested, please specify 1 layer or 3 layers (i.e. 0-0.2, 0.2-0.4, 0.8-1.0). Where "asbestos" is requested, please specify if 40g sample is required for SLS/TF testing)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	CEC/pH	BTEX	PAH	8 Metals	OCP/OPP	PCB	Phenols	Asbestos (0.001%)	TRH	Hold	Containers: 1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964 WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH99-0.0-0.2	9/01/20	Soil		X	X	X				X	X										
2	BH99-0.2-0.4	9/01/20	Soil		X	X	X				X	X										
3	BH99-0.8-1.0	9/01/20	Soil																			
4	BH102-0.0-0.2	9/01/20	Soil		X	X	X	X	X	X	X	X										
5	BH102-0.3-0.5	9/01/20	Soil																			
6	DUP-05	9/01/20	Soil			X	X															
7	DUP-5A	9/01/20	Soil			X	X															Please forward to ALS
8	DUP-06	9/01/20	Soil			X	X															
9	DUP-6A	9/01/20	Soil			X	X															Please forward to ALS
10	TRIP SPIKE / BLANK	9/01/20	Soil		X																	
	Total Counts																					

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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

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

Method of Shipment	☐ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date	9/1/2020	Time	
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	9/1/2020	Time		Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	__/__/__	Time	__:__	Report №	690044

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Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

#AU04_Enviro_Sample_NSW

To: Sam Scully
Subject: RE: ATTENTION:Eurofins Sample Receipt Advice - Report 696041 : Site MILLPERRA (9996)

From: Sam Scully [mailto:sam@allgeo.com.au]
Sent: Friday, 10 January 2020 8:25 AM
To: #AU04_Enviro_Sample_NSW
Cc: enviro
Subject: RE: ATTENTION:Eurofins Sample Receipt Advice - Report 696041 : Site MILLPERRA (9996)

Morning,

Please test groundwater samples for pH, EC, TDS, Anions, Cations, Alkalinity.

Please cancel MW06 and MW07.

Soil samples BH90-0.0-0.1, BH90-0.5-0.7, BH91-0.0-0.1, BH91-0.9-1.1 BH95-0.0-0.2, BH95-0.5-0.7

And

BH96-0.0-0.1 were left out of the eskies accidently yesterday and will be forwarded today.

Please analyse as per COC.

Please do not hesitate to contact me if you have any queries or questions,

Kind Regards,

Sam Scully

Environmental Consultant - 0400 339 745 | **Email:** sam@allgeo.com.au

Alliance Geotechnical
ENGINEERING | ENVIRONMENTAL | TESTING
Your On-Site Geotechnical & Environmental Specialists

OHSAS18001 ISO9001 ISO14001 AS/NZS4801
OH&S QUALITY ENVIRONMENT OH&S

Office Email: admin@allgeo.com.au - **Website:** allgeo.com.au - **Office Phone:** 1800 288 188
PO Box 275, Seven Hills NSW 1730 / Address: 10 Welder Road, Seven Hills NSW 2147

Our office administration will be closed from December 23rd and will reopen on January 6th
For any urgent or unexpected geotechnical or environmental enquiries, please phone 1800 288 188
WISHING EVERYONE HAPPY HOLIDAYS FROM THE ALLIANCE GEOTECHNICAL TEAM!

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Thursday, 9 January 2020 9:20 PM
To: Sam Scully <sam@allgeo.com.au>

Cc: enviro <enviro@allgeo.com.au>
Subject: ATTENTION:Eurofins Sample Receipt Advice - Report 696041 : Site MILLPERRA (9996)

Dear Valued Client,

Please clarify what is meant by Inorganic Compounds. Samples forwarded to ALS; DUP-1A (Metals Bottle), DUP-5A (Soil Jar), and DUP-6A (Soil Jar). Samples not received; MW06, MW07, BH90-0.0-0.1, BH90-0.5-0.7, BH91-0.0-0.1, BH91-0.9-1.1 BH95-0.0-0.2, BH95-0.5-0.7 - analysis cancelled.

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 the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins | mgt Analytical Services Manager as soon as possible to make certain that they get changed.

Regards

Suzanne Ford
Sample Receipt

Eurofins | Environment Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 29900 8492
Email: EnviroSampleNSW@eurofins.com
Website:environment.eurofins.com.au

EnviroNote 1079 - PFAS Fingerprinting
EnviroNote 1080 - Total Organofluorine Analysis & PFAS Investigations
EnviroNote 1079 - PFAS Fingerprinting
EnviroNote 1080 - Total Organofluorine Analysis & PFAS Investigations

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Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

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: **Sam Scully**

Report **694811-W**
Project name MILPERRA
Project ID 9996
Received Date Dec 19, 2019

Client Sample ID			**TRIP SPIKE_16/12/19**	**TRIP BLANK_16/12/19**	**TRIP SPIKE_17/12/19**	**TRIP BLANK_17/12/19**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S19-De29230**	**S19-De29231**	**S19-De29232**	**S19-De29233**
Date Sampled			**Dec 16, 2019**	**Dec 16, 2019**	**Dec 17, 2019**	**Dec 17, 2019**
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	97	< 0.001	99	< 0.001
Toluene	0.001	mg/L	97	< 0.001	100	< 0.001
Ethylbenzene	0.001	mg/L	97	< 0.001	100	< 0.001
m&p-Xylenes	0.002	mg/L	94	< 0.002	99	< 0.002
o-Xylene	0.001	mg/L	100	< 0.001	110	< 0.001
Xylenes - Total	0.003	mg/L	96	< 0.003	100	< 0.003
4-Bromofluorobenzene (surr.)	1	%	101	105	110	97

Client Sample ID			**TRIP SPIKE_18/12/19**	**TRIP BLANK_18/12/19**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**S19-De29234**	**S19-De29235**
Date Sampled			**Dec 18, 2019**	**Dec 18, 2019**
Test/Reference	LOR	Unit		
BTEX				
Benzene	0.001	mg/L	100	< 0.001
Toluene	0.001	mg/L	100	< 0.001
Ethylbenzene	0.001	mg/L	97	< 0.001
m&p-Xylenes	0.002	mg/L	97	< 0.002
o-Xylene	0.001	mg/L	100	< 0.001
Xylenes - Total	0.003	mg/L	98	< 0.003
4-Bromofluorobenzene (surr.)	1	%	104	94

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
BTEX	Sydney	Dec 19, 2019	14 Days

- Method: LTM-ORG-2010 TRH C6-C40

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILPERRA
Project ID: 9996

Order No.:
Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	BH01_0.0-0.2	Dec 16, 2019		Soil	S19-De29140	X							X	X			X
2	BH01_1.2-1.4	Dec 16, 2019		Soil	S19-De29141	X			X				X	X	X		X
3	BH02_0.0-0.2	Dec 16, 2019		Soil	S19-De29142	X							X	X			X
4	BH02_1.4-1.6	Dec 16, 2019		Soil	S19-De29143	X							X	X			X
5	BH03_0.0-0.2	Dec 16, 2019		Soil	S19-De29144	X							X	X			X
6	BH03_1.5-1.7	Dec 16, 2019		Soil	S19-De29145	X			X				X	X	X		X
7	BH04_0.2-0.4	Dec 17, 2019		Soil	S19-De29146	X							X	X			X
8	BH04_0.8-1.0	Dec 17, 2019		Soil	S19-De29147	X							X	X			X
9	BH05_0.2-0.4	Dec 17, 2019		Soil	S19-De29148	X							X	X			X
10	BH05_0.8-1.0	Dec 17, 2019		Soil	S19-De29149	X							X	X			X

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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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILPERRA
Project ID: 9996

Order No.:
Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
11	BH06_0.0.-0.2	Dec 17, 2019		Soil	S19-De29150	X							X	X			X
12	BH06_0.5-0.7	Dec 17, 2019		Soil	S19-De29151	X							X	X			X
13	BH07_0.0-0.2	Dec 17, 2019		Soil	S19-De29152	X							X	X			X
14	BH07_0.5-0.7	Dec 16, 2019		Soil	S19-De29153				X					X	X		
15	BH08_0.0-0.2	Dec 18, 2019		Soil	S19-De29154	X							X	X			X
16	BH08_0.5-0.7	Dec 18, 2019		Soil	S19-De29155	X							X	X			X
17	BH10_0.1-0.3	Dec 16, 2019		Soil	S19-De29156									X		X	
18	BH11_0.0-0.2	Dec 16, 2019		Soil	S19-De29157	X							X	X			X
19	BH14_0.0-0.2	Dec 16, 2019		Soil	S19-De29158									X		X	
20	BH15_0.0-0.2	Dec 16, 2019		Soil	S19-De29159									X		X	
21	BH16_0.0-0.2	Dec 16, 2019		Soil	S19-De29160	X							X	X			X
22	BH17_0.0-0.2	Dec 16, 2019		Soil	S19-De29161	X							X	X			X
23	BH18_0.2-0.4	Dec 16, 2019		Soil	S19-De29162									X		X	

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Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
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Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILPERRA
Project ID: 9996

Order No.:
Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
24	BH19_0.0-0.2	Dec 16, 2019		Soil	S19-De29163									X		X	
25	BH20_0.0-0.15	Dec 16, 2019		Soil	S19-De29164									X		X	
26	BH21_0.1-0.3	Dec 16, 2019		Soil	S19-De29165	X							X	X			X
27	BH22_0.8-1.0	Dec 16, 2019		Soil	S19-De29166	X							X	X			X
28	BH23_0.0-0.2	Dec 16, 2019		Soil	S19-De29167	X							X	X			X
29	BH25_0.0-0.2	Dec 16, 2019		Soil	S19-De29168									X		X	
30	BH26_0.0-0.2	Dec 16, 2019		Soil	S19-De29169									X		X	
31	BH28_0.0-0.2	Dec 16, 2019		Soil	S19-De29170	X							X	X			X
32	BH28_0.8-1.0	Dec 16, 2019		Soil	S19-De29171	X							X	X			X
33	BH29_0.0-0.2	Dec 16, 2019		Soil	S19-De29172	X							X	X			X
34	BH30_0.0-0.2	Dec 16, 2019		Soil	S19-De29173									X		X	
35	BH31_0.0-0.2	Dec 16, 2019		Soil	S19-De29174									X		X	
36	BH32_0.0-0.2	Dec 16, 2019		Soil	S19-De29175									X		X	

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
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Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

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: Alliance Geotechnical
Address: 10 Welder Road
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Project ID: 9996

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Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
37	BH33_0.0-0.2	Dec 16, 2019		Soil	S19-De29176									X		X	
38	BH34_0.0-0.2	Dec 16, 2019		Soil	S19-De29177	X								X		X	
39	BH35_0.0-0.2	Dec 16, 2019		Soil	S19-De29178	X							X	X			X
40	BH36_0.0-0.2	Dec 16, 2019		Soil	S19-De29179	X							X	X			X
41	BH36_1.0-1.2	Dec 16, 2019		Soil	S19-De29180	X							X	X			X
42	BH36_2.0-2.2	Dec 16, 2019		Soil	S19-De29181									X		X	
43	BH37_0.3-0.5	Dec 16, 2019		Soil	S19-De29182	X							X	X			X
44	BH38_0.0-0.2	Dec 16, 2019		Soil	S19-De29183	X								X		X	
45	BH50_0.2-0.4	Dec 17, 2019		Soil	S19-De29184	X							X	X			X
46	BH51_0.2-0.4	Dec 17, 2019		Soil	S19-De29185									X		X	
47	BH52_0.2-0.4	Dec 17, 2019		Soil	S19-De29186									X		X	
48	BH52_0.8-1.0	Dec 17, 2019		Soil	S19-De29187				X					X	X		
49	BH57_0.2-0.4	Dec 17, 2019		Soil	S19-De29188	X							X	X			X

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

New Zealand

Auckland
35 O'Rorke Road
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IANZ # 1327

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Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILPERRA
Project ID: 9996

Order No.:
Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
50	BH58_0.2-0.4	Dec 17, 2019		Soil	S19-De29189									X		X	
51	BH59_0.0-0.05	Dec 17, 2019		Soil	S19-De29190	X								X		X	
52	BH60_0.0-0.2	Dec 17, 2019		Soil	S19-De29191									X		X	
53	BH61_0.15-0.3	Dec 17, 2019		Soil	S19-De29192	X							X	X			X
54	BH62_0.0-0.15	Dec 17, 2019		Soil	S19-De29193									X		X	
55	BH64_0.0-0.1	Dec 17, 2019		Soil	S19-De29194									X		X	
56	BH65_0.0-0.1	Dec 18, 2019		Soil	S19-De29195	X							X	X			X
57	BH66_0.0-0.1	Dec 18, 2019		Soil	S19-De29196	X							X	X			X
58	BH66_0.3-0.5	Dec 18, 2019		Soil	S19-De29197								X	X			X
59	BH66_1.0-1.2	Dec 18, 2019		Soil	S19-De29198									X		X	
60	BH67_0.0-0.05	Dec 18, 2019		Soil	S19-De29199									X		X	
61	BH68_0.0-0.1	Dec 18, 2019		Soil	S19-De29200	X							X	X			X
62	BH69_0.05-0.2	Dec 17, 2019		Soil	S19-De29201									X		X	

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
63	BH71_0.0-0.2	Dec 17, 2019		Soil	S19-De29202	X								X		X	
64	BH72_0.0-0.2	Dec 17, 2019		Soil	S19-De29203	X							X	X			X
65	BH73_0.0-0.2	Dec 17, 2019		Soil	S19-De29204									X		X	
66	BH74_0.0-0.2	Dec 17, 2019		Soil	S19-De29205	X							X	X			X
67	BH75_0.0-0.2	Dec 16, 2019		Soil	S19-De29206									X		X	
68	BH76_0.0-0.2	Dec 16, 2019		Soil	S19-De29207									X		X	
69	BH77_0.0-0.2	Dec 16, 2019		Soil	S19-De29208	X							X	X			X
70	BH78_0.0-0.2	Dec 16, 2019		Soil	S19-De29209									X		X	
71	BH79_0.0-0.2	Dec 16, 2019		Soil	S19-De29210									X		X	
72	BH80_0.0-0.2	Dec 17, 2019		Soil	S19-De29211									X		X	
73	BH81_0.2-0.4	Dec 17, 2019		Soil	S19-De29212	X							X	X			X
74	BH82_0.05-0.2	Dec 17, 2019		Soil	S19-De29213									X		X	
75	BH83_0.05-0.2	Dec 17, 2019		Soil	S19-De29214									X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
76	BH84_0.05-0.2	Dec 17, 2019		Soil	S19-De29215									X		X	
77	BH86_0.0-0.2	Dec 17, 2019		Soil	S19-De29216									X		X	
78	BH87_0.0-0.2	Dec 18, 2019		Soil	S19-De29217									X		X	
79	BH88_0.0-0.2	Dec 18, 2019		Soil	S19-De29218									X		X	
80	BH89_0.0-0.2	Dec 18, 2019		Soil	S19-De29219	X							X	X			X
81	BH92_0.0-0.2	Dec 18, 2019		Soil	S19-De29220	X							X	X			X
82	BH93_0.0-0.2	Dec 18, 2019		Soil	S19-De29221									X		X	
83	BH97_0.0-0.2	Dec 18, 2019		Soil	S19-De29222	X							X	X			X
84	BH100_0.2-0.4	Dec 17, 2019		Soil	S19-De29223									X		X	
85	BH101_0.0-0.2	Dec 18, 2019		Soil	S19-De29224	X								X		X	
86	DUP_01	Dec 16, 2019		Soil	S19-De29225					X	X			X			
87	DUP_02	Dec 16, 2019		Soil	S19-De29226					X	X			X			
88	DUP_03	Dec 17, 2019		Soil	S19-De29227					X	X			X			

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
89	DUP_04	Dec 18, 2019		Soil	S19-De29228					X	X			X			
90	DUP_14	Dec 18, 2019		Soil	S19-De29229					X	X			X			
91	TRIP SPIKE_16/12/19	Dec 16, 2019		Water	S19-De29230							X					
92	TRIP BLANK_16/12/19	Dec 16, 2019		Water	S19-De29231							X					
93	TRIP SPIKE_17/12/19	Dec 17, 2019		Water	S19-De29232							X					
94	TRIP BLANK_17/12/19	Dec 17, 2019		Water	S19-De29233							X					
95	TRIP SPIKE_18/12/	Dec 18, 2019		Water	S19-De29234							X					

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
	SPIKE_18/12/19																
96	TRIP BLANK_18/12/19	Dec 18, 2019		Water	S19-De29235							X					
97	FCS_59	Not Provided		Building Materials	S19-De29236		X										
98	FCS_101	Not Provided		Building Materials	S19-De29237		X										
99	BH01_0.8-1.0	Dec 16, 2019		Soil	S19-De29250			X									
100	BH01_2.2-2.4	Dec 16, 2019		Soil	S19-De29251			X									
101	BH02_0.8-1.0	Dec 16, 2019		Soil	S19-De29252			X									
102	BH02_2.0-2.2	Dec 16, 2019		Soil	S19-De29253			X									
103	BH02_2.9-3.1	Dec 16, 2019		Soil	S19-De29254			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
104	BH03_0.8-1.0	Dec 16, 2019		Soil	S19-De29255			X									
105	BH03_2.3-2.5	Dec 16, 2019		Soil	S19-De29256			X									
106	BH03_3.3-3.5	Dec 16, 2019		Soil	S19-De29257			X									
107	BH05_1.3-1.5	Dec 17, 2019		Soil	S19-De29258			X									
108	BH07_1.4-1.6	Dec 17, 2019		Soil	S19-De29259			X									
109	BH08_1.4-1.6	Dec 18, 2019		Soil	S19-De29260			X									
110	BH10_0.7-0.9	Dec 16, 2019		Soil	S19-De29261			X									
111	BH11_0.2-0.4	Dec 16, 2019		Soil	S19-De29262			X									
112	BH14_0.2-0.4	Dec 16, 2019		Soil	S19-De29263			X									
113	BH15_0.2-0.4	Dec 16, 2019		Soil	S19-De29264			X									
114	BH16_0.8-1.0	Dec 16, 2019		Soil	S19-De29265			X									
115	BH16_2.4-2.6	Dec 16, 2019		Soil	S19-De29266			X									
116	BH17_0.8-1.0	Dec 16, 2019		Soil	S19-De29267			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
117	BH17_1.9-2.1	Dec 16, 2019		Soil	S19-De29268			X									
118	BH18_0.7-0.9	Dec 16, 2019		Soil	S19-De29269			X									
119	BH20_0.7-0.9	Dec 16, 2019		Soil	S19-De29270			X									
120	BH21_0.7-0.9	Dec 16, 2019		Soil	S19-De29271			X									
121	BH22_0.0-0.2	Dec 16, 2019		Soil	S19-De29272			X									
122	BH22_1.9-2.1	Dec 16, 2019		Soil	S19-De29273			X									
123	BH23_0.5-0.7	Dec 16, 2019		Soil	S19-De29274			X									
124	BH25_0.7-0.9	Dec 16, 2019		Soil	S19-De29275			X									
125	BH26_0.7-0.9	Dec 16, 2019		Soil	S19-De29276			X									
126	BH28_1.9-2.1	Dec 16, 2019		Soil	S19-De29277			X									
127	BH29_0.2-0.4	Dec 16, 2019		Soil	S19-De29278			X									
128	BH30_0.2-0.4	Dec 16, 2019		Soil	S19-De29279			X									
129	BH31_0.5-0.7	Dec 16, 2019		Soil	S19-De29280			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
130	BH32_0.5-0.7	Dec 16, 2019		Soil	S19-De29281			X									
131	BH33_0.3-0.5	Dec 16, 2019		Soil	S19-De29282			X									
132	BH35_0.8-1.0	Dec 16, 2019		Soil	S19-De29283			X									
133	BH37_0.8-1.0	Dec 16, 2019		Soil	S19-De29284			X									
134	BH38_0.7-0.9	Dec 16, 2019		Soil	S19-De29285			X									
135	BH50_0.8-1.0	Dec 17, 2019		Soil	S19-De29286			X									
136	BH51_0.8-1.0	Dec 17, 2019		Soil	S19-De29287			X									
137	BH57_0.8-1.0	Dec 17, 2019		Soil	S19-De29288			X									
138	BH58_0.8-1.0	Dec 17, 2019		Soil	S19-De29289			X									
139	BH59_0.1-0.3	Dec 17, 2019		Soil	S19-De29290			X									
140	BH60_0.2-0.4	Dec 17, 2019		Soil	S19-De29291			X									
141	BH61_0.7-0.9	Dec 17, 2019		Soil	S19-De29292			X									
142	BH62_0.2-0.4	Dec 17, 2019		Soil	S19-De29293			X									

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILPERRA
Project ID: 9996

Order No.:
Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
143	BH64_0.1-0.3	Dec 17, 2019		Soil	S19-De29294			X									
144	BH65_0.1-0.3	Dec 18, 2019		Soil	S19-De29295			X									
145	BH67_0.1-0.3	Dec 18, 2019		Soil	S19-De29296			X									
146	BH68_0.1-0.3	Dec 18, 2019		Soil	S19-De29297			X									
147	BH70_0.05-0.2	Dec 17, 2019		Soil	S19-De29298			X									
148	BH71_0.5-0.7	Dec 17, 2019		Soil	S19-De29299			X									
149	BH72_0.5-0.7	Dec 17, 2019		Soil	S19-De29300			X									
150	BH73_0.5-0.7	Dec 17, 2019		Soil	S19-De29301			X									
151	BH74_0.5-0.7	Dec 17, 2019		Soil	S19-De29302			X									
152	BH75_0.5-0.7	Dec 16, 2019		Soil	S19-De29303			X									
153	BH76_0.5-0.7	Dec 16, 2019		Soil	S19-De29304			X									
154	BH77_0.5-0.7	Dec 16, 2019		Soil	S19-De29305			X									
155	BH78_0.5-0.7	Dec 16, 2019		Soil	S19-De29306			X									

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Project ID: 9996

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Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
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Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
156	BH79_0.5-0.7	Dec 16, 2019		Soil	S19-De29307			X									
157	BH80_0.5-0.7	Dec 17, 2019		Soil	S19-De29308			X									
158	BH81_0.5-0.7	Dec 17, 2019		Soil	S19-De29309			X									
159	BH83_0.7-0.9	Dec 17, 2019		Soil	S19-De29310			X									
160	BH84_0.4-0.6	Dec 17, 2019		Soil	S19-De29311			X									
161	BH86_0.5-0.7	Dec 18, 2019		Soil	S19-De29312			X									
162	BH87_0.7-0.9	Dec 18, 2019		Soil	S19-De29313			X									
163	BH88_0.5-0.7	Dec 18, 2019		Soil	S19-De29314			X									
164	BH89_0.6-0.8	Dec 18, 2019		Soil	S19-De29315			X									
165	BH92_0.5-0.7	Dec 18, 2019		Soil	S19-De29316			X									
166	BH93_0.6-0.8	Dec 18, 2019		Soil	S19-De29317			X									
167	BH94_0.6-0.8	Dec 18, 2019		Soil	S19-De29318			X									
168	BH97_0.9-1.1	Dec 18, 2019		Soil	S19-De29319			X									

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Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
169	BH100_0.8-1.0	Dec 17, 2019		Soil	S19-De29320			X									
170	BH101_0.8-1.0	Dec 18, 2019		Soil	S19-De29321			X									
171	DUP10	Dec 17, 2019		Soil	S19-De29322			X									
172	DUP11	Dec 17, 2019		Soil	S19-De29323			X									
173	DUP12	Dec 16, 2019		Soil	S19-De29324			X									
174	DUP13	Dec 17, 2019		Soil	S19-De29325			X									
175	BH94_0.0-0.2	Dec 18, 2019		Soil	S19-De29446									X		X	
176	BH35_1.4-1.6	Dec 16, 2019		Soil	S19-De29449			X									
177	BH64_0.05-0.2	Dec 17, 2019		Soil	S19-De29450			X									
Test Counts						46	2	78	4	5	5	6	42	91	4	42	42

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							
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	
LCS - % Recovery							
BTEX							
Benzene	%	90			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	
m&p-Xylenes	%	93			70-130	Pass	
o-Xylene	%	96			70-130	Pass	
Xylenes - Total	%	94			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-De26503	NCP	%	100			70-130	Pass	
Toluene	S19-De26503	NCP	%	105			70-130	Pass	
Ethylbenzene	S19-De26503	NCP	%	105			70-130	Pass	
m&p-Xylenes	S19-De26503	NCP	%	106			70-130	Pass	
o-Xylene	S19-De26503	NCP	%	102			70-130	Pass	
Xylenes - Total	S19-De26503	NCP	%	105			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	W19-De30367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	W19-De30367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	W19-De30367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	W19-De30367	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	W19-De30367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	W19-De30367	NCP	mg/L	< 0.003	< 0.003	<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

Authorised By

Andrew Black Analytical Services Manager

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

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: **Sam Scully**

Report **694811-S**
Project name MILPERRA
Project ID 9996
Received Date Dec 19, 2019

Client Sample ID			**BH01_0.0-0.2**	**BH01_1.2-1.4**	**BH02_0.0-0.2**	**BH02_1.4-1.6**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S19-De29140**	**S19-De29141**	**S19-De29142**	**S19-De29143**
Date Sampled			**Dec 16, 2019**	**Dec 16, 2019**	**Dec 16, 2019**	**Dec 16, 2019**
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	60
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	190
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	250
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	%	58	56	52	103
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	200
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	220
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	420
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			BH01_0.0-0.2	BH01_1.2-1.4	BH02_0.0-0.2	BH02_1.4-1.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29140	S19-De29141	S19-De29142	S19-De29143
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	%	87	92	91	86
p-Terphenyl-d14 (surr.)	1	%	77	101	110	93
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 10
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 2
Dibutylchlorendate (surr.)	1	%	93	104	92	79
Tetrachloro-m-xylene (surr.)	1	%	93	106	94	86
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			BH01_0.0-0.2	BH01_1.2-1.4	BH02_0.0-0.2	BH02_1.4-1.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29140	S19-De29141	S19-De29142	S19-De29143
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	116	100	133	108
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 5
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	<5
Dibutylchlorendate (surr.)	1	%	93	104	92	79
Tetrachloro-m-xylene (surr.)	1	%	93	106	94	86
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			BH01_0.0-0.2	BH01_1.2-1.4	BH02_0.0-0.2	BH02_1.4-1.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29140	S19-De29141	S19-De29142	S19-De29143
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	74	77	73	73
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	540	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	5.6	-	-
% Moisture	1	%	7.5	14	2.7	11
Heavy Metals						
Arsenic	2	mg/kg	6.3	4.5	6.1	9.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	16	6.9	13
Copper	5	mg/kg	14	12	10	20
Lead	5	mg/kg	16	13	28	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.3	5.4	< 5	9.2
Zinc	5	mg/kg	43	13	55	43
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	9.1	-	-

Client Sample ID			BH03_0.0-0.2	BH03_1.5-1.7	BH04_0.2-0.4	BH04_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29144	S19-De29145	S19-De29146	S19-De29147
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	93	78	87	76

Client Sample ID			BH03_0.0-0.2	BH03_1.5-1.7	BH04_0.2-0.4	BH04_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29144	S19-De29145	S19-De29146	S19-De29147
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 17, 2019	Dec 17, 2019
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	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	89	121	101
p-Terphenyl-d14 (surr.)	1	%	89	89	125	88
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			BH03_0.0-0.2	BH03_1.5-1.7	BH04_0.2-0.4	BH04_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29144	S19-De29145	S19-De29146	S19-De29147
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	89	92	83	57
Tetrachloro-m-xylene (surr.)	1	%	96	103	147	67
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	117	116	89	77

Client Sample ID			BH03_0.0-0.2	BH03_1.5-1.7	BH04_0.2-0.4	BH04_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29144	S19-De29145	S19-De29146	S19-De29147
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	89	92	83	57
Tetrachloro-m-xylene (surr.)	1	%	96	103	147	67
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	81	84	118	99
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	220	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	5.9	-	-
% Moisture	1	%	6.6	12	17	11
Heavy Metals						
Arsenic	2	mg/kg	11	6.6	8.9	4.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	19	20	8.5
Copper	5	mg/kg	13	15	24	27
Lead	5	mg/kg	23	15	19	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	50	9.7	14	20
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	7.1	-	-

Client Sample ID			BH05_0.2-0.4	BH05_0.8-1.0	BH06_0.0.-0.2	BH06_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29148	S19-De29149	S19-De29150	S19-De29151
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
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	80	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	270	69
TRH C29-C36	50	mg/kg	< 50	< 50	450	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	800	69
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	%	94	97	146	80
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	93	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	93	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	580	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	310	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	983	< 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	%	100	95	111	90
p-Terphenyl-d14 (surr.)	1	%	87	99	73	137

Client Sample ID			BH05_0.2-0.4	BH05_0.8-1.0	BH06_0.0.-0.2	BH06_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29148	S19-De29149	S19-De29150	S19-De29151
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	76	75	85	116
Tetrachloro-m-xylene (surr.)	1	%	104	74	69	122
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			BH05_0.2-0.4	BH05_0.8-1.0	BH06_0.0.-0.2	BH06_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29148	S19-De29149	S19-De29150	S19-De29151
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	109	94	111	94
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	76	75	85	116
Tetrachloro-m-xylene (surr.)	1	%	104	74	69	122
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	93	102	99	79
% Moisture	1	%	13	13	6.1	19

Client Sample ID			BH05_0.2-0.4	BH05_0.8-1.0	BH06_0.0.-0.2	BH06_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29148	S19-De29149	S19-De29150	S19-De29151
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	9.8	7.1	5.2	9.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	22	14	12	28
Copper	5	mg/kg	19	14	18	12
Lead	5	mg/kg	24	15	73	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	5.6	< 5
Zinc	5	mg/kg	27	7.0	58	13

Client Sample ID			BH07_0.0-0.2	BH07_0.5-0.7	BH08_0.0-0.2	BH08_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29152	S19-De29153	S19-De29154	S19-De29155
Date Sampled			Dec 17, 2019	Dec 16, 2019	Dec 18, 2019	Dec 18, 2019
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	67	-	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	67	-	< 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	%	124	-	120	126
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

Client Sample ID			BH07_0.0-0.2	BH07_0.5-0.7	BH08_0.0-0.2	BH08_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29152	S19-De29153	S19-De29154	S19-De29155
Date Sampled			Dec 17, 2019	Dec 16, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	73	-	73	90
p-Terphenyl-d14 (surr.)	1	%	115	-	89	148
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Toxaphene	1	mg/kg	< 1	-	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	101	-	99	104
Tetrachloro-m-xylene (surr.)	1	%	90	-	75	113
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	-	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2

Client Sample ID			BH07_0.0-0.2	BH07_0.5-0.7	BH08_0.0-0.2	BH08_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29152	S19-De29153	S19-De29154	S19-De29155
Date Sampled			Dec 17, 2019	Dec 16, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Diazinon	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	-	< 2	< 2
Naled	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	-	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	114	-	105	89
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	101	-	99	104
Tetrachloro-m-xylene (surr.)	1	%	90	-	75	113
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	< 1

Client Sample ID			BH07_0.0-0.2	BH07_0.5-0.7	BH08_0.0-0.2	BH08_0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29152	S19-De29153	S19-De29154	S19-De29155
Date Sampled			Dec 17, 2019	Dec 16, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	-	< 5	< 5
Dinoseb	20	mg/kg	< 20	-	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	< 20
Phenol-d6 (surr.)	1	%	86	-	76	81
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	63	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	5.1	-	-
% Moisture	1	%	6.1	13	4.5	20
Heavy Metals						
Arsenic	2	mg/kg	11	-	3.0	11
Cadmium	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Chromium	5	mg/kg	20	-	6.4	30
Copper	5	mg/kg	16	-	23	23
Lead	5	mg/kg	25	-	31	15
Mercury	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Nickel	5	mg/kg	12	-	< 5	< 5
Zinc	5	mg/kg	32	-	91	24
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	6.1	-	-

Client Sample ID			BH10_0.1-0.3	BH11_0.0-0.2	BH14_0.0-0.2	BH15_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29156	S19-De29157	S19-De29158	S19-De29159
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	94
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	94
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	92	66	81

Client Sample ID			BH10_0.1-0.3	BH11_0.0-0.2	BH14_0.0-0.2	BH15_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29156	S19-De29157	S19-De29158	S19-De29159
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	< 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	110
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	110
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	%	93	89	101	99
p-Terphenyl-d14 (surr.)	1	%	143	129	102	121
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			BH10_0.1-0.3	BH11_0.0-0.2	BH14_0.0-0.2	BH15_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29156	S19-De29157	S19-De29158	S19-De29159
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	1	mg/kg	-	< 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	%	-	91	-	-
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	-	-
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	%	-	87	-	-

Client Sample ID			BH10_0.1-0.3	BH11_0.0-0.2	BH14_0.0-0.2	BH15_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29156	S19-De29157	S19-De29158	S19-De29159
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	%	-	91	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	96	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
2-Nitrophenol	1	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Phenol-d6 (surr.)	1	%	-	73	-	-
% Moisture	1	%	2.0	6.6	5.0	5.3
Heavy Metals						
Arsenic	2	mg/kg	< 2	72	7.9	8.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	7.0	13	8.4
Copper	5	mg/kg	23	9.3	8.5	11
Lead	5	mg/kg	27	14	16	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	5.9	< 5	< 5
Zinc	5	mg/kg	85	34	17	41

Client Sample ID			BH16_0.0-0.2	BH17_0.0-0.2	BH18_0.2-0.4	BH19_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29160	S19-De29161	S19-De29162	S19-De29163
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	130	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	160	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	290	< 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	%	92	87	92	69
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	210	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	110	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	320	< 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	%	99	103	85	96
p-Terphenyl-d14 (surr.)	1	%	110	69	67	85

Client Sample ID			BH16_0.0-0.2	BH17_0.0-0.2	BH18_0.2-0.4	BH19_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29160	S19-De29161	S19-De29162	S19-De29163
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	0.14	0.14	-	-
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	1	mg/kg	< 1	< 1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.14	0.14	-	-
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	%	85	84	-	-
Tetrachloro-m-xylene (surr.)	1	%	107	109	-	-
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			BH16_0.0-0.2	BH17_0.0-0.2	BH18_0.2-0.4	BH19_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29160	S19-De29161	S19-De29162	S19-De29163
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	%	97	86	-	-
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	%	85	84	-	-
Tetrachloro-m-xylene (surr.)	1	%	107	109	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
2-Nitrophenol	1	mg/kg	< 1	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Phenol-d6 (surr.)	1	%	93	95	-	-
% Moisture	1	%	4.1	3.4	5.6	7.4

Client Sample ID			BH16_0.0-0.2	BH17_0.0-0.2	BH18_0.2-0.4	BH19_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29160	S19-De29161	S19-De29162	S19-De29163
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	11	16	6.6	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	10	19	9.1	16
Copper	5	mg/kg	11	9.7	12	15
Lead	5	mg/kg	15	18	18	31
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	7.2
Zinc	5	mg/kg	47	36	72	72

Client Sample ID			BH20_0.0-0.15	BH21_0.1-0.3	BH22_0.8-1.0	BH23_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29164	S19-De29165	S19-De29166	S19-De29167
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	72	< 50	< 50
TRH C29-C36	50	mg/kg	66	72	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	66	144	< 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	72	96	80
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	120	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	120	< 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

Client Sample ID			BH20_0.0-0.15	BH21_0.1-0.3	BH22_0.8-1.0	BH23_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29164	S19-De29165	S19-De29166	S19-De29167
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	99	105	93	97
p-Terphenyl-d14 (surr.)	1	%	91	71	61	75
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	91	51	77
Tetrachloro-m-xylene (surr.)	1	%	-	103	103	104
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

Client Sample ID			BH20_0.0-0.15	BH21_0.1-0.3	BH22_0.8-1.0	BH23_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29164	S19-De29165	S19-De29166	S19-De29167
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	94	83	79
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	-	91	51	77
Tetrachloro-m-xylene (surr.)	1	%	-	103	103	104
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	-	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	< 1	< 1	< 1

Client Sample ID			BH20_0.0-0.15	BH21_0.1-0.3	BH22_0.8-1.0	BH23_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29164	S19-De29165	S19-De29166	S19-De29167
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	-	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	-	< 5	< 5	< 5
Dinoseb	20	mg/kg	-	< 20	< 20	< 20
Phenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	-	91	98	103
% Moisture	1	%	2.1	1.5	7.0	3.8
Heavy Metals						
Arsenic	2	mg/kg	5.2	15	6.6	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.5	7.5	11	< 5
Copper	5	mg/kg	38	19	47	5.3
Lead	5	mg/kg	66	40	24	6.8
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	38	< 5
Zinc	5	mg/kg	160	56	180	19

Client Sample ID			BH25_0.0-0.2	BH26_0.0-0.2	BH28_0.0-0.2	BH28_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29168	S19-De29169	S19-De29170	S19-De29171
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	65	63	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	65	63	< 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	%	83	84	77	70
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

Client Sample ID			BH25_0.0-0.2	BH26_0.0-0.2	BH28_0.0-0.2	BH28_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29168	S19-De29169	S19-De29170	S19-De29171
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	89	90	88	87
p-Terphenyl-d14 (surr.)	1	%	136	135	114	122
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	1	mg/kg	-	-	< 1	< 1

Client Sample ID			BH25_0.0-0.2	BH26_0.0-0.2	BH28_0.0-0.2	BH28_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29168	S19-De29169	S19-De29170	S19-De29171
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	%	-	-	90	92
Tetrachloro-m-xylene (surr.)	1	%	-	-	96	97
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	-	< 2	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2	< 2
Naled	0.2	mg/kg	-	-	< 0.2	< 0.2
Omethoate	2	mg/kg	-	-	< 2	< 2
Phorate	0.2	mg/kg	-	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	99	87
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

Client Sample ID			BH25_0.0-0.2	BH26_0.0-0.2	BH28_0.0-0.2	BH28_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29168	S19-De29169	S19-De29170	S19-De29171
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	90	92
Tetrachloro-m-xylene (surr.)	1	%	-	-	96	97
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	-	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	-	-	< 5	< 5
Dinoseb	20	mg/kg	-	-	< 20	< 20
Phenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	< 20
Phenol-d6 (surr.)	1	%	-	-	82	75
% Moisture	1	%	4.9	4.6	4.4	9.2
Heavy Metals						
Arsenic	2	mg/kg	2.1	3.6	2.9	4.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.2	8.2	7.1	27
Copper	5	mg/kg	6.5	11	5.5	< 5
Lead	5	mg/kg	14	20	7.9	8.9
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	32	61	27	6.1

Client Sample ID			BH29_0.0-0.2	BH30_0.0-0.2	BH31_0.0-0.2	BH32_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29172	S19-De29173	S19-De29174	S19-De29175
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	58	< 50	57	< 50
TRH C10-C36 (Total)	50	mg/kg	58	< 50	57	< 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	%	75	79	79	76
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	88	85	88	86
p-Terphenyl-d14 (surr.)	1	%	121	125	137	119

Client Sample ID			BH29_0.0-0.2	BH30_0.0-0.2	BH31_0.0-0.2	BH32_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29172	S19-De29173	S19-De29174	S19-De29175
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	1	mg/kg	< 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	%	93	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	92	-	-	-
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			BH29_0.0-0.2	BH30_0.0-0.2	BH31_0.0-0.2	BH32_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29172	S19-De29173	S19-De29174	S19-De29175
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	%	98	-	-	-
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	%	93	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	92	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Phenol-d6 (surr.)	1	%	80	-	-	-
% Moisture	1	%	4.3	3.8	5.3	5.5

Client Sample ID			BH29_0.0-0.2	BH30_0.0-0.2	BH31_0.0-0.2	BH32_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29172	S19-De29173	S19-De29174	S19-De29175
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	19	15	4.8	6.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	10	8.3	9.8	17
Copper	5	mg/kg	8.8	12	8.6	9.9
Lead	5	mg/kg	18	39	18	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	6.3
Zinc	5	mg/kg	40	30	27	16

Client Sample ID			BH33_0.0-0.2	BH34_0.0-0.2	BH35_0.0-0.2	BH36_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29176	S19-De29177	S19-De29178	S19-De29179
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	56	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	106	< 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	%	76	79	77	86
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH33_0.0-0.2	BH34_0.0-0.2	BH35_0.0-0.2	BH36_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29176	S19-De29177	S19-De29178	S19-De29179
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	90	90	96	87
p-Terphenyl-d14 (surr.)	1	%	129	127	101	53
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	0.07
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	1	mg/kg	-	-	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	0.07
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	%	-	-	140	52
Tetrachloro-m-xylene (surr.)	1	%	-	-	115	66
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

Client Sample ID			BH33_0.0-0.2	BH34_0.0-0.2	BH35_0.0-0.2	BH36_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29176	S19-De29177	S19-De29178	S19-De29179
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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
Methyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2	< 2
Naled	0.2	mg/kg	-	-	< 0.2	< 0.2
Omethoate	2	mg/kg	-	-	< 2	< 2
Phorate	0.2	mg/kg	-	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	102	83
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	%	-	-	140	52
Tetrachloro-m-xylene (surr.)	1	%	-	-	115	66
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	< 1

Client Sample ID			BH33_0.0-0.2	BH34_0.0-0.2	BH35_0.0-0.2	BH36_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29176	S19-De29177	S19-De29178	S19-De29179
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	-	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	-	-	< 5	< 5
Dinoseb	20	mg/kg	-	-	< 20	< 20
Phenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	< 20
Phenol-d6 (surr.)	1	%	-	-	92	85
% Moisture	1	%	5.5	5.7	9.6	8.3
Heavy Metals						
Arsenic	2	mg/kg	14	12	11	10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	17	22	15
Copper	5	mg/kg	16	13	16	22
Lead	5	mg/kg	16	19	20	41
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	16	< 5	5.8	6.6
Zinc	5	mg/kg	67	42	43	84

Client Sample ID			BH36_1.0-1.2	BH36_2.0-2.2	BH37_0.3-0.5	BH38_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29180	S19-De29181	S19-De29182	S19-De29183
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
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	54
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	58
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	112
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	68	79	68
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

Client Sample ID			BH36_1.0-1.2	BH36_2.0-2.2	BH37_0.3-0.5	BH38_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29180	S19-De29181	S19-De29182	S19-De29183
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
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	0.6
2-Fluorobiphenyl (surr.)	1	%	109	90	78	90
p-Terphenyl-d14 (surr.)	1	%	84	127	91	80
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	0.18	-	0.17	-
4.4'-DDT	0.05	mg/kg	0.23	-	< 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	1	mg/kg	< 1	-	< 1	-

Client Sample ID			BH36_1.0-1.2	BH36_2.0-2.2	BH37_0.3-0.5	BH38_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29180	S19-De29181	S19-De29182	S19-De29183
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.41	-	0.17	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.41	-	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	78	-	97	-
Tetrachloro-m-xylene (surr.)	1	%	70	-	79	-
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	-
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	%	92	-	94	-
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	-

Client Sample ID			BH36_1.0-1.2	BH36_2.0-2.2	BH37_0.3-0.5	BH38_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29180	S19-De29181	S19-De29182	S19-De29183
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	78	-	97	-
Tetrachloro-m-xylene (surr.)	1	%	70	-	79	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	-	< 5	-
Dinoseb	20	mg/kg	< 20	-	< 20	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	-
Phenol-d6 (surr.)	1	%	91	-	77	-
% Moisture	1	%	8.9	17	8.0	3.2
Heavy Metals						
Arsenic	2	mg/kg	13	12	8.3	2.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	22	27	17	7.2
Copper	5	mg/kg	17	24	14	29
Lead	5	mg/kg	43	20	19	44
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.2	< 5	< 5	6.5
Zinc	5	mg/kg	51	23	38	120

Client Sample ID			BH50_0.2-0.4	BH51_0.2-0.4	BH52_0.2-0.4	BH52_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29184	S19-De29185	S19-De29186	S19-De29187
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
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	%	69	76	124	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	77	101	96	-
p-Terphenyl-d14 (surr.)	1	%	82	87	93	-

Client Sample ID			BH50_0.2-0.4	BH51_0.2-0.4	BH52_0.2-0.4	BH52_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29184	S19-De29185	S19-De29186	S19-De29187
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
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	1	mg/kg	< 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	%	104	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	-
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			BH50_0.2-0.4	BH51_0.2-0.4	BH52_0.2-0.4	BH52_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29184	S19-De29185	S19-De29186	S19-De29187
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
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	%	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	%	104	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Phenol-d6 (surr.)	1	%	83	-	-	-

Client Sample ID			BH50_0.2-0.4	BH51_0.2-0.4	BH52_0.2-0.4	BH52_0.8-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29184	S19-De29185	S19-De29186	S19-De29187
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	-	29
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	-	5.2
% Moisture	1	%	11	14	14	10
Heavy Metals						
Arsenic	2	mg/kg	14	13	7.3	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	27	30	13	-
Copper	5	mg/kg	32	25	20	-
Lead	5	mg/kg	17	14	16	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	15	18	< 5	-
Zinc	5	mg/kg	27	22	11	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	8.4

Client Sample ID			BH57_0.2-0.4	BH58_0.2-0.4	BH59_0.0-0.05	BH60_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29188	S19-De29189	S19-De29190	S19-De29191
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
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	85	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	74	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	159	< 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	%	138	111	109	107
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	120	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	120	< 100

Client Sample ID			BH57_0.2-0.4	BH58_0.2-0.4	BH59_0.0-0.05	BH60_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29188	S19-De29189	S19-De29190	S19-De29191
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	71	95	86	94
p-Terphenyl-d14 (surr.)	1	%	92	89	82	82
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	1	mg/kg	< 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	%	102	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	73	-	-	-

Client Sample ID			BH57_0.2-0.4	BH58_0.2-0.4	BH59_0.0-0.05	BH60_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29188	S19-De29189	S19-De29190	S19-De29191
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
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	%	97	-	-	-
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	%	102	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	73	-	-	-

Client Sample ID			BH57_0.2-0.4	BH58_0.2-0.4	BH59_0.0-0.05	BH60_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29188	S19-De29189	S19-De29190	S19-De29191
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Phenol-d6 (surr.)	1	%	77	-	-	-
% Moisture	1	%	13	9.2	6.7	24
Heavy Metals						
Arsenic	2	mg/kg	9.1	8.4	2.3	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	29	8.7	19
Copper	5	mg/kg	41	24	6.1	21
Lead	5	mg/kg	22	13	8.7	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	25	5.5	< 5
Zinc	5	mg/kg	23	29	19	16

Client Sample ID			BH61_0.15-0.3	BH62_0.0-0.15	BH64_0.0-0.1	BH65_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29192	S19-De29193	S19-De29194	S19-De29195
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 40	< 40	< 20
TRH C10-C14	20	mg/kg	< 20	120	170	< 20
TRH C15-C28	50	mg/kg	< 50	1400	660	110
TRH C29-C36	50	mg/kg	< 50	720	610	170
TRH C10-C36 (Total)	50	mg/kg	< 50	2240	1440	280

Client Sample ID			BH61_0.15-0.3	BH62_0.0-0.15	BH64_0.0-0.1	BH65_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29192	S19-De29193	S19-De29194	S19-De29195
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 18, 2019
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	%	119	109	119	119
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 40	< 40	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 40	< 40	< 20
TRH >C10-C16	50	mg/kg	< 50	140	210	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	140	210	< 50
TRH >C16-C34	100	mg/kg	< 100	1800	1000	220
TRH >C34-C40	100	mg/kg	< 100	610	480	140
TRH >C10-C40 (total)*	100	mg/kg	< 100	2550	1690	360
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	%	78	99	95	80
p-Terphenyl-d14 (surr.)	1	%	89	104	78	106
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

Client Sample ID			BH61_0.15-0.3	BH62_0.0-0.15	BH64_0.0-0.1	BH65_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29192	S19-De29193	S19-De29194	S19-De29195
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	-	-	< 0.2
Toxaphene	1	mg/kg	< 1	-	-	< 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	%	107	-	-	95
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	85
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
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

Client Sample ID			BH61_0.15-0.3	BH62_0.0-0.15	BH64_0.0-0.1	BH65_0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29192	S19-De29193	S19-De29194	S19-De29195
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	99	-	-	107
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	%	107	-	-	95
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	85
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	< 1
Pentachlorophenol	1	mg/kg	< 1	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	-	-	< 5
Dinoseb	20	mg/kg	< 20	-	-	< 20
Phenol	0.5	mg/kg	< 0.5	-	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	< 20
Phenol-d6 (surr.)	1	%	84	-	-	79
% Moisture	1	%	10	11	8.3	6.2
Heavy Metals						
Arsenic	2	mg/kg	6.0	< 2	2.4	5.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	< 5	7.4	21
Copper	5	mg/kg	17	15	23	24
Lead	5	mg/kg	15	13	21	28
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
Nickel	5	mg/kg	12	< 5	5.9	14
Zinc	5	mg/kg	28	50	96	72

Client Sample ID			BH66_0.0-0.1	BH66_0.3-0.5	BH66_1.0-1.2	BH67_0.0-0.05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29196	S19-De29197	S19-De29198	S19-De29199
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
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	29
TRH C15-C28	50	mg/kg	78	62	< 50	120
TRH C29-C36	50	mg/kg	130	81	< 50	210
TRH C10-C36 (Total)	50	mg/kg	208	143	< 50	359
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	%	108	111	118	129
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	150	120	< 100	260
TRH >C34-C40	100	mg/kg	110	< 100	< 100	120
TRH >C10-C40 (total)*	100	mg/kg	260	120	< 100	380
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	0.6	0.8	< 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	0.6	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.6	0.8	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	1.2	2.2	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	83	83	104	106
p-Terphenyl-d14 (surr.)	1	%	103	99	103	97

Client Sample ID			BH66_0.0-0.1	BH66_0.3-0.5	BH66_1.0-1.2	BH67_0.0-0.05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29196	S19-De29197	S19-De29198	S19-De29199
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
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	1	mg/kg	< 1	< 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	%	90	95	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	87	-	-
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			BH66_0.0-0.1	BH66_0.3-0.5	BH66_1.0-1.2	BH67_0.0-0.05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29196	S19-De29197	S19-De29198	S19-De29199
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
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	%	102	111	-	-
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	%	90	95	-	-
Tetrachloro-m-xylene (surr.)	1	%	82	87	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
2-Nitrophenol	1	mg/kg	< 1	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Phenol-d6 (surr.)	1	%	81	86	-	-
% Moisture	1	%	7.2	7.1	11	6.7

Client Sample ID			BH66_0.0-0.1	BH66_0.3-0.5	BH66_1.0-1.2	BH67_0.0-0.05
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29196	S19-De29197	S19-De29198	S19-De29199
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	7.4	16	12	5.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	26	27	10
Copper	5	mg/kg	42	21	28	14
Lead	5	mg/kg	45	59	31	14
Mercury	0.1	mg/kg	0.1	0.1	0.1	< 0.1
Nickel	5	mg/kg	10	7.5	9.5	5.7
Zinc	5	mg/kg	83	140	58	47

Client Sample ID			BH68_0.0-0.1	BH69_0.05-0.2	BH71_0.0-0.2	BH72_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29200	S19-De29201	S19-De29202	S19-De29203
Date Sampled			Dec 18, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
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	290	< 50	140	< 50
TRH C29-C36	50	mg/kg	310	< 50	180	140
TRH C10-C36 (Total)	50	mg/kg	600	< 50	320	140
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	%	115	108	118	117
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	52	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	52	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	490	< 100	310	110
TRH >C34-C40	100	mg/kg	170	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	712	< 100	310	110
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

Client Sample ID			BH68_0.0-0.1	BH69_0.05-0.2	BH71_0.0-0.2	BH72_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29200	S19-De29201	S19-De29202	S19-De29203
Date Sampled			Dec 18, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	87	70	109	71
p-Terphenyl-d14 (surr.)	1	%	108	92	102	88
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	1	mg/kg	< 1	-	-	< 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	%	94	-	-	102
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	74
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

Client Sample ID			BH68_0.0-0.1	BH69_0.05-0.2	BH71_0.0-0.2	BH72_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29200	S19-De29201	S19-De29202	S19-De29203
Date Sampled			Dec 18, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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
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	%	107	-	-	106
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	%	94	-	-	102
Tetrachloro-m-xylene (surr.)	1	%	82	-	-	74
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	< 1
Pentachlorophenol	1	mg/kg	< 1	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	< 1

Client Sample ID			BH68_0.0-0.1	BH69_0.05-0.2	BH71_0.0-0.2	BH72_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29200	S19-De29201	S19-De29202	S19-De29203
Date Sampled			Dec 18, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	< 0.2
2-Nitrophenol	1	mg/kg	< 1	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	< 0.4
4-Nitrophenol	5	mg/kg	< 5	-	-	< 5
Dinoseb	20	mg/kg	< 20	-	-	< 20
Phenol	0.5	mg/kg	< 0.5	-	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	< 20
Phenol-d6 (surr.)	1	%	90	-	-	81
% Moisture	1	%	2.7	12	5.3	4.4
Heavy Metals						
Arsenic	2	mg/kg	3.2	9.0	12	7.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.7	20	15	16
Copper	5	mg/kg	9.0	7.1	28	17
Lead	5	mg/kg	12	15	65	41
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Nickel	5	mg/kg	6.9	8.8	6.6	5.1
Zinc	5	mg/kg	34	13	110	70

Client Sample ID			BH73_0.0-0.2	BH74_0.0-0.2	BH75_0.0-0.2	BH76_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29204	S19-De29205	S19-De29206	S19-De29207
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 16, 2019	Dec 16, 2019
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	81	120
TRH C29-C36	50	mg/kg	< 50	110	150	160
TRH C10-C36 (Total)	50	mg/kg	< 50	110	231	280
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	%	118	113	67	78
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

Client Sample ID			BH73_0.0-0.2	BH74_0.0-0.2	BH75_0.0-0.2	BH76_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29204	S19-De29205	S19-De29206	S19-De29207
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	130	200	250
TRH >C34-C40	100	mg/kg	< 100	< 100	100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	130	300	250
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	%	95	74	95	95
p-Terphenyl-d14 (surr.)	1	%	76	98	73	68
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	1	mg/kg	-	< 1	-	-

Client Sample ID			BH73_0.0-0.2	BH74_0.0-0.2	BH75_0.0-0.2	BH76_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29204	S19-De29205	S19-De29206	S19-De29207
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	%	-	97	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	82	-	-
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	%	-	101	-	-
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	-	-

Client Sample ID			BH73_0.0-0.2	BH74_0.0-0.2	BH75_0.0-0.2	BH76_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29204	S19-De29205	S19-De29206	S19-De29207
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 16, 2019	Dec 16, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	-
Total PCB*	0.5	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	97	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	82	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
2-Nitrophenol	1	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Phenol-d6 (surr.)	1	%	-	77	-	-
% Moisture	1	%	3.7	5.9	6.4	5.4
Heavy Metals						
Arsenic	2	mg/kg	7.6	5.3	5.4	7.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	19	21	18	20
Copper	5	mg/kg	25	15	13	18
Lead	5	mg/kg	22	71	45	47
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.7	6.4	5.1	7.5
Zinc	5	mg/kg	70	46	31	40

Client Sample ID			BH77_0.0-0.2	BH78_0.0-0.2	BH79_0.0-0.2	BH80_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29208	S19-De29209	S19-De29210	S19-De29211
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 17, 2019
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	110	< 20	< 20
TRH C15-C28	50	mg/kg	100	290	190	110
TRH C29-C36	50	mg/kg	130	330	340	210
TRH C10-C36 (Total)	50	mg/kg	230	730	530	320
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	%	83	78	85	81
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	130	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	130	< 50	< 50
TRH >C16-C34	100	mg/kg	200	510	450	270
TRH >C34-C40	100	mg/kg	< 100	160	190	110
TRH >C10-C40 (total)*	100	mg/kg	200	800	640	380
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	%	79	70	94	91
p-Terphenyl-d14 (surr.)	1	%	98	60	80	84

Client Sample ID			BH77_0.0-0.2	BH78_0.0-0.2	BH79_0.0-0.2	BH80_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29208	S19-De29209	S19-De29210	S19-De29211
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 17, 2019
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	1	mg/kg	< 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	%	80	-	-	-
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			BH77_0.0-0.2	BH78_0.0-0.2	BH79_0.0-0.2	BH80_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29208	S19-De29209	S19-De29210	S19-De29211
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 17, 2019
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	%	100	-	-	-
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	%	80	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Phenol-d6 (surr.)	1	%	79	-	-	-
% Moisture	1	%	5.6	5.1	5.1	5.5

Client Sample ID			BH77_0.0-0.2	BH78_0.0-0.2	BH79_0.0-0.2	BH80_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29208	S19-De29209	S19-De29210	S19-De29211
Date Sampled			Dec 16, 2019	Dec 16, 2019	Dec 16, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	6.5	16	6.4	7.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	13	14	20
Copper	5	mg/kg	16	11	18	20
Lead	5	mg/kg	33	24	55	72
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.9	< 5	5.5	7.0
Zinc	5	mg/kg	31	25	42	53

Client Sample ID			BH81_0.2-0.4	BH82_0.05-0.2	BH83_0.05-0.2	BH84_0.05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29212	S19-De29213	S19-De29214	S19-De29215
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
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	91	< 50	< 50	53
TRH C29-C36	50	mg/kg	330	< 50	< 50	51
TRH C10-C36 (Total)	50	mg/kg	421	< 50	< 50	104
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	%	61	63	67	72
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	300	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	180	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	480	< 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

Client Sample ID			BH81_0.2-0.4	BH82_0.05-0.2	BH83_0.05-0.2	BH84_0.05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29212	S19-De29213	S19-De29214	S19-De29215
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	79	94	92	94
p-Terphenyl-d14 (surr.)	1	%	97	78	82	88
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	1	mg/kg	< 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	%	108	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	78	-	-	-
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	-	-	-

Client Sample ID			BH81_0.2-0.4	BH82_0.05-0.2	BH83_0.05-0.2	BH84_0.05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29212	S19-De29213	S19-De29214	S19-De29215
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	109	-	-	-
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	%	108	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	78	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-

Client Sample ID			BH81_0.2-0.4	BH82_0.05-0.2	BH83_0.05-0.2	BH84_0.05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29212	S19-De29213	S19-De29214	S19-De29215
Date Sampled			Dec 17, 2019	Dec 17, 2019	Dec 17, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
2-Nitrophenol	1	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Phenol-d6 (surr.)	1	%	78	-	-	-
% Moisture	1	%	22	18	7.6	2.9
Heavy Metals						
Arsenic	2	mg/kg	5.8	15	14	5.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	15	32	28	41
Copper	5	mg/kg	14	19	< 5	12
Lead	5	mg/kg	18	14	12	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.4	15	< 5	29
Zinc	5	mg/kg	25	19	< 5	25

Client Sample ID			BH86_0.0-0.2	BH87_0.0-0.2	BH88_0.0-0.2	BH89_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29216	S19-De29217	S19-De29218	S19-De29219
Date Sampled			Dec 17, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
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	140	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	420	69	51	< 50
TRH C29-C36	50	mg/kg	540	99	63	55
TRH C10-C36 (Total)	50	mg/kg	1100	168	114	55
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	97	70	113	80
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	150	< 50	< 50	< 50

Client Sample ID			BH86_0.0-0.2	BH87_0.0-0.2	BH88_0.0-0.2	BH89_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29216	S19-De29217	S19-De29218	S19-De29219
Date Sampled			Dec 17, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	150	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	790	130	< 100	< 100
TRH >C34-C40	100	mg/kg	380	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	1320	130	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	95	98	106	82
p-Terphenyl-d14 (surr.)	1	%	80	98	104	102
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	1	mg/kg	-	-	-	< 1

Client Sample ID			BH86_0.0-0.2	BH87_0.0-0.2	BH88_0.0-0.2	BH89_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29216	S19-De29217	S19-De29218	S19-De29219
Date Sampled			Dec 17, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	%	-	-	-	111
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	86
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	%	-	-	-	114
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

Client Sample ID			BH86_0.0-0.2	BH87_0.0-0.2	BH88_0.0-0.2	BH89_0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29216	S19-De29217	S19-De29218	S19-De29219
Date Sampled			Dec 17, 2019	Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	-	-	-	< 0.5
Total PCB*	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	-	111
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	86
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
2-Nitrophenol	1	mg/kg	-	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
4-Nitrophenol	5	mg/kg	-	-	-	< 5
Dinoseb	20	mg/kg	-	-	-	< 20
Phenol	0.5	mg/kg	-	-	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20
Phenol-d6 (surr.)	1	%	-	-	-	89
% Moisture	1	%	6.5	7.1	4.5	6.4
Heavy Metals						
Arsenic	2	mg/kg	12	6.0	11	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	12	15	15
Copper	5	mg/kg	18	13	19	11
Lead	5	mg/kg	28	25	37	27
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	5.5	8.8	< 5
Zinc	5	mg/kg	56	57	120	40

Client Sample ID			BH92_0.0-0.2	BH93_0.0-0.2	BH97_0.0-0.2	BH100_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29220	S19-De29221	S19-De29222	S19-De29223
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 17, 2019
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	110	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	100	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	210	< 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	%	86	90	131	79
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	160	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	160	< 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	%	92	105	91	101
p-Terphenyl-d14 (surr.)	1	%	117	91	111	101

Client Sample ID			BH92_0.0-0.2	BH93_0.0-0.2	BH97_0.0-0.2	BH100_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29220	S19-De29221	S19-De29222	S19-De29223
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 17, 2019
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	0.17	-	< 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	1	mg/kg	< 1	-	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.17	-	< 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	%	121	-	111	-
Tetrachloro-m-xylene (surr.)	1	%	103	-	93	-
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			BH92_0.0-0.2	BH93_0.0-0.2	BH97_0.0-0.2	BH100_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29220	S19-De29221	S19-De29222	S19-De29223
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 17, 2019
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	%	118	-	110	-
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	%	121	-	111	-
Tetrachloro-m-xylene (surr.)	1	%	103	-	93	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	-
2-Nitrophenol	1	mg/kg	< 1	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	-
4-Nitrophenol	5	mg/kg	< 5	-	< 5	-
Dinoseb	20	mg/kg	< 20	-	< 20	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	-
Phenol-d6 (surr.)	1	%	96	-	84	-
% Moisture	1	%	3.1	5.3	3.5	15

Client Sample ID			BH92_0.0-0.2	BH93_0.0-0.2	BH97_0.0-0.2	BH100_0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29220	S19-De29221	S19-De29222	S19-De29223
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	19	8.5	5.0	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	18	7.7	7.3	17
Copper	5	mg/kg	10.0	13	14	16
Lead	5	mg/kg	13	21	19	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	15	40	71	8.6

Client Sample ID			BH101_0.0-0.2	DUP_01	DUP_02	DUP_03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29224	S19-De29225	S19-De29226	S19-De29227
Date Sampled			Dec 18, 2019	Dec 16, 2019	Dec 16, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	57	-	-	-
TRH C10-C36 (Total)	50	mg/kg	57	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	93	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	-
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 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

Client Sample ID			BH101_0.0-0.2	DUP_01	DUP_02	DUP_03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-De29224	S19-De29225	S19-De29226	S19-De29227
Date Sampled			Dec 18, 2019	Dec 16, 2019	Dec 16, 2019	Dec 17, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	104	95	100	101
p-Terphenyl-d14 (surr.)	1	%	91	87	87	76
% Moisture	1	%	6.3	2.1	5.6	6.4
Heavy Metals						
Arsenic	2	mg/kg	14	16	8.5	19
Cadmium	0.4	mg/kg	0.5	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	20	34	15	24
Copper	5	mg/kg	23	15	13	21
Lead	5	mg/kg	62	29	28	36
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.2	11	< 5	16
Zinc	5	mg/kg	140	56	43	40

Client Sample ID			DUP_04	DUP_14	BH94_0.0-0.2
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S19-De29228	S19-De29229	S19-De29446
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	26
TRH C15-C28	50	mg/kg	-	-	200
TRH C29-C36	50	mg/kg	-	-	140
TRH C10-C36 (Total)	50	mg/kg	-	-	366
BTEX					
Benzene	0.1	mg/kg	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1
Xylenes - Total	0.3	mg/kg	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	78
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	< 50

Client Sample ID			DUP_04	DUP_14	BH94_0.0-0.2
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S19-De29228	S19-De29229	S19-De29446
Date Sampled			Dec 18, 2019	Dec 18, 2019	Dec 18, 2019
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	280
TRH >C34-C40	100	mg/kg	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	280
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	99	101	80
p-Terphenyl-d14 (surr.)	1	%	91	95	93
% Moisture	1	%	3.8	3.5	5.8
Heavy Metals					
Arsenic	2	mg/kg	3.8	5.4	7.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.9	8.0	9.1
Copper	5	mg/kg	25	12	14
Lead	5	mg/kg	36	22	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5
Zinc	5	mg/kg	93	70	38

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 23, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Dec 23, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 23, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Dec 23, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Dec 23, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Dec 23, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Dec 23, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Dec 23, 2019	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Dec 23, 2019	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Dec 23, 2019	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Dec 23, 2019	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Dec 30, 2019	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Dec 30, 2019	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Dec 20, 2019	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
% Moisture	Sydney	Dec 19, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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
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New Zealand

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Project Name: MILPERRA
Project ID: 9996

Order No.:
Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	BH01_0.0-0.2	Dec 16, 2019		Soil	S19-De29140	X							X	X			X
2	BH01_1.2-1.4	Dec 16, 2019		Soil	S19-De29141	X			X				X	X	X		X
3	BH02_0.0-0.2	Dec 16, 2019		Soil	S19-De29142	X							X	X			X
4	BH02_1.4-1.6	Dec 16, 2019		Soil	S19-De29143	X							X	X			X
5	BH03_0.0-0.2	Dec 16, 2019		Soil	S19-De29144	X							X	X			X
6	BH03_1.5-1.7	Dec 16, 2019		Soil	S19-De29145	X			X				X	X	X		X
7	BH04_0.2-0.4	Dec 17, 2019		Soil	S19-De29146	X							X	X			X
8	BH04_0.8-1.0	Dec 17, 2019		Soil	S19-De29147	X							X	X			X
9	BH05_0.2-0.4	Dec 17, 2019		Soil	S19-De29148	X							X	X			X
10	BH05_0.8-1.0	Dec 17, 2019		Soil	S19-De29149	X							X	X			X

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Australia

Melbourne
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New Zealand

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
11	BH06_0.0.-0.2	Dec 17, 2019		Soil	S19-De29150	X							X	X			X
12	BH06_0.5-0.7	Dec 17, 2019		Soil	S19-De29151	X							X	X			X
13	BH07_0.0-0.2	Dec 17, 2019		Soil	S19-De29152	X							X	X			X
14	BH07_0.5-0.7	Dec 16, 2019		Soil	S19-De29153				X					X	X		
15	BH08_0.0-0.2	Dec 18, 2019		Soil	S19-De29154	X							X	X			X
16	BH08_0.5-0.7	Dec 18, 2019		Soil	S19-De29155	X							X	X			X
17	BH10_0.1-0.3	Dec 16, 2019		Soil	S19-De29156									X		X	
18	BH11_0.0-0.2	Dec 16, 2019		Soil	S19-De29157	X							X	X			X
19	BH14_0.0-0.2	Dec 16, 2019		Soil	S19-De29158									X		X	
20	BH15_0.0-0.2	Dec 16, 2019		Soil	S19-De29159									X		X	
21	BH16_0.0-0.2	Dec 16, 2019		Soil	S19-De29160	X							X	X			X
22	BH17_0.0-0.2	Dec 16, 2019		Soil	S19-De29161	X							X	X			X
23	BH18_0.2-0.4	Dec 16, 2019		Soil	S19-De29162									X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
24	BH19_0.0-0.2	Dec 16, 2019		Soil	S19-De29163									X		X	
25	BH20_0.0-0.15	Dec 16, 2019		Soil	S19-De29164									X		X	
26	BH21_0.1-0.3	Dec 16, 2019		Soil	S19-De29165	X							X	X			X
27	BH22_0.8-1.0	Dec 16, 2019		Soil	S19-De29166	X							X	X			X
28	BH23_0.0-0.2	Dec 16, 2019		Soil	S19-De29167	X							X	X			X
29	BH25_0.0-0.2	Dec 16, 2019		Soil	S19-De29168									X		X	
30	BH26_0.0-0.2	Dec 16, 2019		Soil	S19-De29169									X		X	
31	BH28_0.0-0.2	Dec 16, 2019		Soil	S19-De29170	X							X	X			X
32	BH28_0.8-1.0	Dec 16, 2019		Soil	S19-De29171	X							X	X			X
33	BH29_0.0-0.2	Dec 16, 2019		Soil	S19-De29172	X							X	X			X
34	BH30_0.0-0.2	Dec 16, 2019		Soil	S19-De29173									X		X	
35	BH31_0.0-0.2	Dec 16, 2019		Soil	S19-De29174									X		X	
36	BH32_0.0-0.2	Dec 16, 2019		Soil	S19-De29175									X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
37	BH33_0.0-0.2	Dec 16, 2019		Soil	S19-De29176									X		X	
38	BH34_0.0-0.2	Dec 16, 2019		Soil	S19-De29177	X								X		X	
39	BH35_0.0-0.2	Dec 16, 2019		Soil	S19-De29178	X							X	X			X
40	BH36_0.0-0.2	Dec 16, 2019		Soil	S19-De29179	X							X	X			X
41	BH36_1.0-1.2	Dec 16, 2019		Soil	S19-De29180	X							X	X			X
42	BH36_2.0-2.2	Dec 16, 2019		Soil	S19-De29181									X		X	
43	BH37_0.3-0.5	Dec 16, 2019		Soil	S19-De29182	X							X	X			X
44	BH38_0.0-0.2	Dec 16, 2019		Soil	S19-De29183	X								X		X	
45	BH50_0.2-0.4	Dec 17, 2019		Soil	S19-De29184	X							X	X			X
46	BH51_0.2-0.4	Dec 17, 2019		Soil	S19-De29185									X		X	
47	BH52_0.2-0.4	Dec 17, 2019		Soil	S19-De29186									X		X	
48	BH52_0.8-1.0	Dec 17, 2019		Soil	S19-De29187				X					X	X		
49	BH57_0.2-0.4	Dec 17, 2019		Soil	S19-De29188	X							X	X			X

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
50	BH58_0.2-0.4	Dec 17, 2019		Soil	S19-De29189									X		X	
51	BH59_0.0-0.05	Dec 17, 2019		Soil	S19-De29190	X								X		X	
52	BH60_0.0-0.2	Dec 17, 2019		Soil	S19-De29191									X		X	
53	BH61_0.15-0.3	Dec 17, 2019		Soil	S19-De29192	X							X	X			X
54	BH62_0.0-0.15	Dec 17, 2019		Soil	S19-De29193									X		X	
55	BH64_0.0-0.1	Dec 17, 2019		Soil	S19-De29194									X		X	
56	BH65_0.0-0.1	Dec 18, 2019		Soil	S19-De29195	X							X	X			X
57	BH66_0.0-0.1	Dec 18, 2019		Soil	S19-De29196	X							X	X			X
58	BH66_0.3-0.5	Dec 18, 2019		Soil	S19-De29197								X	X			X
59	BH66_1.0-1.2	Dec 18, 2019		Soil	S19-De29198									X		X	
60	BH67_0.0-0.05	Dec 18, 2019		Soil	S19-De29199									X		X	
61	BH68_0.0-0.1	Dec 18, 2019		Soil	S19-De29200	X							X	X			X
62	BH69_0.05-0.2	Dec 17, 2019		Soil	S19-De29201									X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
63	BH71_0.0-0.2	Dec 17, 2019		Soil	S19-De29202	X								X		X	
64	BH72_0.0-0.2	Dec 17, 2019		Soil	S19-De29203	X							X	X			X
65	BH73_0.0-0.2	Dec 17, 2019		Soil	S19-De29204									X		X	
66	BH74_0.0-0.2	Dec 17, 2019		Soil	S19-De29205	X							X	X			X
67	BH75_0.0-0.2	Dec 16, 2019		Soil	S19-De29206									X		X	
68	BH76_0.0-0.2	Dec 16, 2019		Soil	S19-De29207									X		X	
69	BH77_0.0-0.2	Dec 16, 2019		Soil	S19-De29208	X							X	X			X
70	BH78_0.0-0.2	Dec 16, 2019		Soil	S19-De29209									X		X	
71	BH79_0.0-0.2	Dec 16, 2019		Soil	S19-De29210									X		X	
72	BH80_0.0-0.2	Dec 17, 2019		Soil	S19-De29211									X		X	
73	BH81_0.2-0.4	Dec 17, 2019		Soil	S19-De29212	X							X	X			X
74	BH82_0.05-0.2	Dec 17, 2019		Soil	S19-De29213									X		X	
75	BH83_0.05-0.2	Dec 17, 2019		Soil	S19-De29214									X		X	

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Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
76	BH84_0.05-0.2	Dec 17, 2019		Soil	S19-De29215									X		X	
77	BH86_0.0-0.2	Dec 17, 2019		Soil	S19-De29216									X		X	
78	BH87_0.0-0.2	Dec 18, 2019		Soil	S19-De29217									X		X	
79	BH88_0.0-0.2	Dec 18, 2019		Soil	S19-De29218									X		X	
80	BH89_0.0-0.2	Dec 18, 2019		Soil	S19-De29219	X							X	X			X
81	BH92_0.0-0.2	Dec 18, 2019		Soil	S19-De29220	X							X	X			X
82	BH93_0.0-0.2	Dec 18, 2019		Soil	S19-De29221									X		X	
83	BH97_0.0-0.2	Dec 18, 2019		Soil	S19-De29222	X							X	X			X
84	BH100_0.2-0.4	Dec 17, 2019		Soil	S19-De29223									X		X	
85	BH101_0.0-0.2	Dec 18, 2019		Soil	S19-De29224	X								X		X	
86	DUP_01	Dec 16, 2019		Soil	S19-De29225					X	X			X			
87	DUP_02	Dec 16, 2019		Soil	S19-De29226					X	X			X			
88	DUP_03	Dec 17, 2019		Soil	S19-De29227					X	X			X			

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILPERRA
Project ID: 9996

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
89	DUP_04	Dec 18, 2019		Soil	S19-De29228					X	X			X			
90	DUP_14	Dec 18, 2019		Soil	S19-De29229					X	X			X			
91	TRIP SPIKE_16/12/19	Dec 16, 2019		Water	S19-De29230							X					
92	TRIP BLANK_16/12/19	Dec 16, 2019		Water	S19-De29231							X					
93	TRIP SPIKE_17/12/19	Dec 17, 2019		Water	S19-De29232							X					
94	TRIP BLANK_17/12/19	Dec 17, 2019		Water	S19-De29233							X					
95	TRIP SPIKE_18/12/	Dec 18, 2019		Water	S19-De29234							X					

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Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
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NATA # 1261 Site # 18217

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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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

New Zealand

Auckland
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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
	SPIKE_18/12/19																
96	TRIP BLANK_18/12/19	Dec 18, 2019		Water	S19-De29235							X					
97	FCS_59	Not Provided		Building Materials	S19-De29236		X										
98	FCS_101	Not Provided		Building Materials	S19-De29237		X										
99	BH01_0.8-1.0	Dec 16, 2019		Soil	S19-De29250			X									
100	BH01_2.2-2.4	Dec 16, 2019		Soil	S19-De29251			X									
101	BH02_0.8-1.0	Dec 16, 2019		Soil	S19-De29252			X									
102	BH02_2.0-2.2	Dec 16, 2019		Soil	S19-De29253			X									
103	BH02_2.9-3.1	Dec 16, 2019		Soil	S19-De29254			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
104	BH03_0.8-1.0	Dec 16, 2019		Soil	S19-De29255			X									
105	BH03_2.3-2.5	Dec 16, 2019		Soil	S19-De29256			X									
106	BH03_3.3-3.5	Dec 16, 2019		Soil	S19-De29257			X									
107	BH05_1.3-1.5	Dec 17, 2019		Soil	S19-De29258			X									
108	BH07_1.4-1.6	Dec 17, 2019		Soil	S19-De29259			X									
109	BH08_1.4-1.6	Dec 18, 2019		Soil	S19-De29260			X									
110	BH10_0.7-0.9	Dec 16, 2019		Soil	S19-De29261			X									
111	BH11_0.2-0.4	Dec 16, 2019		Soil	S19-De29262			X									
112	BH14_0.2-0.4	Dec 16, 2019		Soil	S19-De29263			X									
113	BH15_0.2-0.4	Dec 16, 2019		Soil	S19-De29264			X									
114	BH16_0.8-1.0	Dec 16, 2019		Soil	S19-De29265			X									
115	BH16_2.4-2.6	Dec 16, 2019		Soil	S19-De29266			X									
116	BH17_0.8-1.0	Dec 16, 2019		Soil	S19-De29267			X									

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Australia

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
117	BH17_1.9-2.1	Dec 16, 2019		Soil	S19-De29268			X									
118	BH18_0.7-0.9	Dec 16, 2019		Soil	S19-De29269			X									
119	BH20_0.7-0.9	Dec 16, 2019		Soil	S19-De29270			X									
120	BH21_0.7-0.9	Dec 16, 2019		Soil	S19-De29271			X									
121	BH22_0.0-0.2	Dec 16, 2019		Soil	S19-De29272			X									
122	BH22_1.9-2.1	Dec 16, 2019		Soil	S19-De29273			X									
123	BH23_0.5-0.7	Dec 16, 2019		Soil	S19-De29274			X									
124	BH25_0.7-0.9	Dec 16, 2019		Soil	S19-De29275			X									
125	BH26_0.7-0.9	Dec 16, 2019		Soil	S19-De29276			X									
126	BH28_1.9-2.1	Dec 16, 2019		Soil	S19-De29277			X									
127	BH29_0.2-0.4	Dec 16, 2019		Soil	S19-De29278			X									
128	BH30_0.2-0.4	Dec 16, 2019		Soil	S19-De29279			X									
129	BH31_0.5-0.7	Dec 16, 2019		Soil	S19-De29280			X									

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NATA # 1261 Site # 18217

Brisbane
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Phone : +61 7 3902 4600
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Perth
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NATA # 1261
Site # 23736

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Auckland
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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
130	BH32_0.5-0.7	Dec 16, 2019		Soil	S19-De29281			X									
131	BH33_0.3-0.5	Dec 16, 2019		Soil	S19-De29282			X									
132	BH35_0.8-1.0	Dec 16, 2019		Soil	S19-De29283			X									
133	BH37_0.8-1.0	Dec 16, 2019		Soil	S19-De29284			X									
134	BH38_0.7-0.9	Dec 16, 2019		Soil	S19-De29285			X									
135	BH50_0.8-1.0	Dec 17, 2019		Soil	S19-De29286			X									
136	BH51_0.8-1.0	Dec 17, 2019		Soil	S19-De29287			X									
137	BH57_0.8-1.0	Dec 17, 2019		Soil	S19-De29288			X									
138	BH58_0.8-1.0	Dec 17, 2019		Soil	S19-De29289			X									
139	BH59_0.1-0.3	Dec 17, 2019		Soil	S19-De29290			X									
140	BH60_0.2-0.4	Dec 17, 2019		Soil	S19-De29291			X									
141	BH61_0.7-0.9	Dec 17, 2019		Soil	S19-De29292			X									
142	BH62_0.2-0.4	Dec 17, 2019		Soil	S19-De29293			X									

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NATA # 1261
Site # 1254 & 14271

Sydney
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NATA # 1261 Site # 18217

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
143	BH64_0.1-0.3	Dec 17, 2019		Soil	S19-De29294			X									
144	BH65_0.1-0.3	Dec 18, 2019		Soil	S19-De29295			X									
145	BH67_0.1-0.3	Dec 18, 2019		Soil	S19-De29296			X									
146	BH68_0.1-0.3	Dec 18, 2019		Soil	S19-De29297			X									
147	BH70_0.05-0.2	Dec 17, 2019		Soil	S19-De29298			X									
148	BH71_0.5-0.7	Dec 17, 2019		Soil	S19-De29299			X									
149	BH72_0.5-0.7	Dec 17, 2019		Soil	S19-De29300			X									
150	BH73_0.5-0.7	Dec 17, 2019		Soil	S19-De29301			X									
151	BH74_0.5-0.7	Dec 17, 2019		Soil	S19-De29302			X									
152	BH75_0.5-0.7	Dec 16, 2019		Soil	S19-De29303			X									
153	BH76_0.5-0.7	Dec 16, 2019		Soil	S19-De29304			X									
154	BH77_0.5-0.7	Dec 16, 2019		Soil	S19-De29305			X									
155	BH78_0.5-0.7	Dec 16, 2019		Soil	S19-De29306			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
156	BH79_0.5-0.7	Dec 16, 2019		Soil	S19-De29307			X									
157	BH80_0.5-0.7	Dec 17, 2019		Soil	S19-De29308			X									
158	BH81_0.5-0.7	Dec 17, 2019		Soil	S19-De29309			X									
159	BH83_0.7-0.9	Dec 17, 2019		Soil	S19-De29310			X									
160	BH84_0.4-0.6	Dec 17, 2019		Soil	S19-De29311			X									
161	BH86_0.5-0.7	Dec 18, 2019		Soil	S19-De29312			X									
162	BH87_0.7-0.9	Dec 18, 2019		Soil	S19-De29313			X									
163	BH88_0.5-0.7	Dec 18, 2019		Soil	S19-De29314			X									
164	BH89_0.6-0.8	Dec 18, 2019		Soil	S19-De29315			X									
165	BH92_0.5-0.7	Dec 18, 2019		Soil	S19-De29316			X									
166	BH93_0.6-0.8	Dec 18, 2019		Soil	S19-De29317			X									
167	BH94_0.6-0.8	Dec 18, 2019		Soil	S19-De29318			X									
168	BH97_0.9-1.1	Dec 18, 2019		Soil	S19-De29319			X									

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Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

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Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
169	BH100_0.8-1.0	Dec 17, 2019		Soil	S19-De29320			X									
170	BH101_0.8-1.0	Dec 18, 2019		Soil	S19-De29321			X									
171	DUP10	Dec 17, 2019		Soil	S19-De29322			X									
172	DUP11	Dec 17, 2019		Soil	S19-De29323			X									
173	DUP12	Dec 16, 2019		Soil	S19-De29324			X									
174	DUP13	Dec 17, 2019		Soil	S19-De29325			X									
175	BH94_0.0-0.2	Dec 18, 2019		Soil	S19-De29446									X		X	
176	BH35_1.4-1.6	Dec 16, 2019		Soil	S19-De29449			X									
177	BH64_0.05-0.2	Dec 17, 2019		Soil	S19-De29450			X									
Test Counts						46	2	78	4	5	5	6	42	91	4	42	42

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	< 1			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							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	85			70-130	Pass	
TRH C10-C14	%	110			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	111			70-130	Pass	
Toluene	%	98			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	99			70-130	Pass	
o-Xylene	%	99			70-130	Pass	
Xylenes - Total	%	99			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	120			70-130	Pass	
TRH C6-C10	%	76			70-130	Pass	
TRH >C10-C16	%	106			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	89			70-130	Pass	
Acenaphthylene	%	103			70-130	Pass	
Anthracene	%	128			70-130	Pass	
Benz(a)anthracene	%	108			70-130	Pass	
Benzo(a)pyrene	%	112			70-130	Pass	
Benzo(b&j)fluoranthene	%	112			70-130	Pass	
Benzo(g.h.i)perylene	%	113			70-130	Pass	
Benzo(k)fluoranthene	%	114			70-130	Pass	
Chrysene	%	104			70-130	Pass	
Dibenz(a.h)anthracene	%	116			70-130	Pass	
Fluoranthene	%	105			70-130	Pass	
Fluorene	%	102			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	113			70-130	Pass	
Naphthalene	%	106			70-130	Pass	
Phenanthrene	%	122			70-130	Pass	
Pyrene	%	109			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	101			70-130	Pass	
4.4'-DDD	%	102			70-130	Pass	
4.4'-DDE	%	101			70-130	Pass	
4.4'-DDT	%	101			70-130	Pass	
a-BHC	%	101			70-130	Pass	
Aldrin	%	100			70-130	Pass	
b-BHC	%	98			70-130	Pass	
d-BHC	%	100			70-130	Pass	
Dieldrin	%	100			70-130	Pass	
Endosulfan I	%	95			70-130	Pass	
Endosulfan II	%	94			70-130	Pass	
Endosulfan sulphate	%	102			70-130	Pass	
Endrin	%	107			70-130	Pass	
Endrin aldehyde	%	100			70-130	Pass	
Endrin ketone	%	98			70-130	Pass	
g-BHC (Lindane)	%	99			70-130	Pass	
Heptachlor	%	96			70-130	Pass	
Heptachlor epoxide	%	106			70-130	Pass	
Hexachlorobenzene	%	100			70-130	Pass	
Methoxychlor	%	104			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	88			70-130	Pass	
Dimethoate	%	84			70-130	Pass	
Ethion	%	104			70-130	Pass	
Fenitrothion	%	97			70-130	Pass	
Methyl parathion	%	123			70-130	Pass	
Mevinphos	%	104			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	82			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	85			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4-Dichlorophenol	%	97			30-130	Pass	
2.4.5-Trichlorophenol	%	111			30-130	Pass	
2.4.6-Trichlorophenol	%	106			30-130	Pass	
2.6-Dichlorophenol	%	111			30-130	Pass	
4-Chloro-3-methylphenol	%	95			30-130	Pass	
Pentachlorophenol	%	87			30-130	Pass	
Tetrachlorophenols - Total	%	97			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	75			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	92			30-130	Pass	
2-Methylphenol (o-Cresol)	%	85			30-130	Pass	
2-Nitrophenol	%	114			30-130	Pass	
2.4-Dimethylphenol	%	115			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	98			30-130	Pass	
4-Nitrophenol	%	112			30-130	Pass	
Phenol	%	74			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			70-130	Pass	
Cadmium	%	97			70-130	Pass	
Chromium	%	100			70-130	Pass	
Copper	%	100			70-130	Pass	
Lead	%	95			70-130	Pass	
Mercury	%	98			70-130	Pass	
Nickel	%	100			70-130	Pass	
Zinc	%	99			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-De22720	NCP	%	88			70-130	Pass	
Acenaphthylene	S19-De22720	NCP	%	99			70-130	Pass	
Anthracene	S19-De22720	NCP	%	106			70-130	Pass	
Benz(a)anthracene	S19-De22720	NCP	%	110			70-130	Pass	
Benzo(a)pyrene	S19-De22720	NCP	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	S19-De22720	NCP	%	96			70-130	Pass	
Benzo(g.h.i)perylene	S19-De22720	NCP	%	97			70-130	Pass	
Benzo(k)fluoranthene	S19-De22720	NCP	%	94			70-130	Pass	
Chrysene	S19-De22720	NCP	%	99			70-130	Pass	
Dibenz(a.h)anthracene	S19-De22720	NCP	%	103			70-130	Pass	
Fluoranthene	S19-De22720	NCP	%	96			70-130	Pass	
Fluorene	S19-De22720	NCP	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-De22720	NCP	%	100			70-130	Pass	
Naphthalene	S19-De22720	NCP	%	99			70-130	Pass	
Phenanthrene	S19-De22720	NCP	%	103			70-130	Pass	
Pyrene	S19-De22720	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S19-De28705	NCP	%	94			70-130	Pass	
4.4'-DDD	S19-De28705	NCP	%	123			70-130	Pass	
4.4'-DDE	S19-De28705	NCP	%	96			70-130	Pass	
4.4'-DDT	S19-De23218	NCP	%	78			70-130	Pass	
a-BHC	S19-De28705	NCP	%	97			70-130	Pass	
Aldrin	S19-De28705	NCP	%	96			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
b-BHC	S19-De28705	NCP	%	92			70-130	Pass	
d-BHC	S19-De28705	NCP	%	95			70-130	Pass	
Dieldrin	S19-De28705	NCP	%	94			70-130	Pass	
Endosulfan I	S19-De28705	NCP	%	96			70-130	Pass	
Endosulfan II	S19-De28705	NCP	%	95			70-130	Pass	
Endosulfan sulphate	S19-De28705	NCP	%	92			70-130	Pass	
Endrin	S19-De28705	NCP	%	96			70-130	Pass	
Endrin aldehyde	S19-De28705	NCP	%	89			70-130	Pass	
Endrin ketone	S19-De28705	NCP	%	73			70-130	Pass	
g-BHC (Lindane)	S19-De28705	NCP	%	90			70-130	Pass	
Heptachlor	S19-De28705	NCP	%	79			70-130	Pass	
Heptachlor epoxide	S19-De28705	NCP	%	100			70-130	Pass	
Hexachlorobenzene	S19-De28705	NCP	%	96			70-130	Pass	
Methoxychlor	S19-De23218	NCP	%	80			70-130	Pass	
Toxaphene	S19-De23218	NCP	%	82			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S19-De22720	NCP	%	95			70-130	Pass	
Dimethoate	S19-De22720	NCP	%	92			70-130	Pass	
Ethion	S19-De22720	NCP	%	119			70-130	Pass	
Fenitrothion	S19-De22720	NCP	%	103			70-130	Pass	
Methyl parathion	S19-De22720	NCP	%	130			70-130	Pass	
Mevinphos	S19-De22720	NCP	%	112			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-De29162	CP	%	103			70-130	Pass	
Cadmium	S19-De29162	CP	%	102			70-130	Pass	
Chromium	S19-De29162	CP	%	107			70-130	Pass	
Copper	S19-De29162	CP	%	108			70-130	Pass	
Lead	S19-De29162	CP	%	100			70-130	Pass	
Mercury	S19-De29162	CP	%	94			70-130	Pass	
Nickel	S19-De29162	CP	%	113			70-130	Pass	
Zinc	S19-De29162	CP	%	123			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-De29181	CP	%	80			70-130	Pass	
TRH C10-C14	S19-De29181	CP	%	79			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-De29181	CP	%	98			70-130	Pass	
Toluene	S19-De29181	CP	%	98			70-130	Pass	
Ethylbenzene	S19-De29181	CP	%	95			70-130	Pass	
m&p-Xylenes	S19-De29181	CP	%	97			70-130	Pass	
o-Xylene	S19-De29181	CP	%	94			70-130	Pass	
Xylenes - Total	S19-De29181	CP	%	96			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-De29181	CP	%	90			70-130	Pass	
TRH C6-C10	S19-De29181	CP	%	72			70-130	Pass	
TRH >C10-C16	S19-De29181	CP	%	76			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-De29208	CP	%	92			70-130	Pass	
Cadmium	S19-De29208	CP	%	95			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chromium	S19-De29208	CP	%	94			70-130	Pass	
Copper	S19-De29208	CP	%	97			70-130	Pass	
Lead	S19-De29208	CP	%	100			70-130	Pass	
Mercury	S19-De29208	CP	%	114			70-130	Pass	
Nickel	S19-De29208	CP	%	99			70-130	Pass	
Zinc	S19-De29208	CP	%	82			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-De29213	CP	%	110			70-130	Pass	
Cadmium	S19-De29213	CP	%	103			70-130	Pass	
Chromium	S19-De29213	CP	%	98			70-130	Pass	
Copper	S19-De29213	CP	%	83			70-130	Pass	
Lead	S19-De29213	CP	%	99			70-130	Pass	
Mercury	S19-De29213	CP	%	111			70-130	Pass	
Nickel	S19-De29213	CP	%	88			70-130	Pass	
Zinc	S19-De29213	CP	%	81			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S19-De29222	CP	%	80			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S19-De29222	CP	%	76			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-De29223	CP	%	110			70-130	Pass	
Cadmium	S19-De29223	CP	%	111			70-130	Pass	
Chromium	S19-De29223	CP	%	101			70-130	Pass	
Copper	S19-De29223	CP	%	92			70-130	Pass	
Lead	S19-De29223	CP	%	100			70-130	Pass	
Mercury	S19-De29223	CP	%	124			70-130	Pass	
Nickel	S19-De29223	CP	%	95			70-130	Pass	
Zinc	S19-De29223	CP	%	91			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	S19-De28703	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29140	CP	mg/kg	6.3	8.9	35	30%	Fail	Q15
Cadmium	S19-De29140	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29140	CP	mg/kg	17	21	22	30%	Pass	
Copper	S19-De29140	CP	mg/kg	14	13	5.0	30%	Pass	
Lead	S19-De29140	CP	mg/kg	16	19	18	30%	Pass	
Mercury	S19-De29140	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29140	CP	mg/kg	6.3	6.0	5.0	30%	Pass	
Zinc	S19-De29140	CP	mg/kg	43	47	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	B19-De26048	NCP	uS/cm	260	250	5.2	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	S19-De29141	CP	pH Units	5.6	5.3	Pass	30%	Pass	
Duplicate									
Cation Exchange Capacity				Result 1	Result 2	RPD			
Cation Exchange Capacity	B19-De28447	NCP	meq/100g	19	19	4.0	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-De29149	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S19-De29149	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-De29149	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-De29149	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-De29149	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-De29149	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-De29149	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-De29149	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-De29149	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-De29149	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S19-De29149	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-De29149	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-De29149	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-De29149	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
g-BHC (Lindane)	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-De29149	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-De29149	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-De29149	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-De29149	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S19-De29149	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S19-De29149	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S19-De29149	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S19-De29149	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S19-De29149	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S19-De29149	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S19-De29149	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S19-De29149	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S19-De29149	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S19-De29149	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S19-De29149	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S19-De29149	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S19-De29149	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S19-De29149	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S19-De29149	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-De29155	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-De29155	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-De29155	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-De29155	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-De29155	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-De29155	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Chlorpyrifos-methyl	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-De29155	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-De29155	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-De29155	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S19-De29155	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S19-De29155	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S19-De29155	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S19-De29155	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S19-De29155	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S19-De29155	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S19-De29155	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S19-De29155	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S19-De29155	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S19-De29155	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S19-De29155	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S19-De29155	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S19-De29155	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S19-De29155	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-De29155	CP	%	20	20	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29161	CP	mg/kg	16	15	12	30%	Pass	
Cadmium	S19-De29161	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29161	CP	mg/kg	19	22	14	30%	Pass	
Copper	S19-De29161	CP	mg/kg	9.7	11	11	30%	Pass	
Lead	S19-De29161	CP	mg/kg	18	19	8.0	30%	Pass	
Mercury	S19-De29161	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29161	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-De29161	CP	mg/kg	36	39	7.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-De29165	CP	%	1.5	2.0	29	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29171	CP	mg/kg	4.3	4.4	2.0	30%	Pass	
Cadmium	S19-De29171	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29171	CP	mg/kg	27	24	9.0	30%	Pass	
Copper	S19-De29171	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S19-De29171	CP	mg/kg	8.9	8.9	1.0	30%	Pass	
Mercury	S19-De29171	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29171	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-De29171	CP	mg/kg	6.1	5.6	8.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-De29175	CP	%	5.5	8.3	41	30%	Fail	Q15
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-De29180	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-De29180	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-De29180	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-De29180	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-De29180	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-De29180	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S19-De29180	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S19-De29180	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S19-De29180	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S19-De29180	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S19-De29180	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S19-De29180	CP	mg/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S19-De29180	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S19-De29180	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S19-De29180	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S19-De29180	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S19-De29180	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S19-De29180	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S19-De29180	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S19-De29180	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S19-De29180	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29181	CP	mg/kg	12	12	2.0	30%	Pass	
Cadmium	S19-De29181	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29181	CP	mg/kg	27	27	3.0	30%	Pass	
Copper	S19-De29181	CP	mg/kg	24	24	1.0	30%	Pass	
Lead	S19-De29181	CP	mg/kg	20	24	15	30%	Pass	
Mercury	S19-De29181	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29181	CP	mg/kg	< 5	5.1	12	30%	Pass	
Zinc	S19-De29181	CP	mg/kg	23	25	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-De29185	CP	%	14	14	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29191	CP	mg/kg	14	14	4.0	30%	Pass	
Cadmium	S19-De29191	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29191	CP	mg/kg	19	19	1.0	30%	Pass	
Copper	S19-De29191	CP	mg/kg	21	21	1.0	30%	Pass	
Lead	S19-De29191	CP	mg/kg	15	16	1.0	30%	Pass	
Mercury	S19-De29191	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29191	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-De29191	CP	mg/kg	16	16	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29192	CP	mg/kg	6.0	8.0	29	30%	Pass	
Cadmium	S19-De29192	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29192	CP	mg/kg	17	14	22	30%	Pass	
Copper	S19-De29192	CP	mg/kg	17	19	14	30%	Pass	
Lead	S19-De29192	CP	mg/kg	15	17	9.0	30%	Pass	
Mercury	S19-De29192	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29192	CP	mg/kg	12	8.3	39	30%	Fail	Q15
Zinc	S19-De29192	CP	mg/kg	28	29	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-De29195	CP	%	6.2	5.3	16	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29202	CP	mg/kg	12	10	15	30%	Pass	
Cadmium	S19-De29202	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29202	CP	mg/kg	15	13	13	30%	Pass	
Copper	S19-De29202	CP	mg/kg	28	26	4.0	30%	Pass	
Lead	S19-De29202	CP	mg/kg	65	58	11	30%	Pass	
Mercury	S19-De29202	CP	mg/kg	0.1	0.1	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel	S19-De29202	CP	mg/kg	6.6	6.0	9.0	30%	Pass	
Zinc	S19-De29202	CP	mg/kg	110	100	9.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-De29205	CP	%	5.9	5.9	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29212	CP	mg/kg	5.8	5.8	<1	30%	Pass	
Cadmium	S19-De29212	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29212	CP	mg/kg	15	13	11	30%	Pass	
Copper	S19-De29212	CP	mg/kg	14	15	7.0	30%	Pass	
Lead	S19-De29212	CP	mg/kg	18	15	22	30%	Pass	
Mercury	S19-De29212	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29212	CP	mg/kg	7.4	8.1	10	30%	Pass	
Zinc	S19-De29212	CP	mg/kg	25	22	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-De29215	CP	%	2.9	3.4	17	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-De29220	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-De29220	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-De29220	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-De29220	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-De29220	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-De29220	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-De29220	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-De29220	CP	mg/kg	0.17	0.19	8.0	30%	Pass	
4.4'-DDT	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
b-BHC	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-De29220	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-De29220	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-De29220	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-De29220	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S19-De29220	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S19-De29220	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S19-De29220	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S19-De29220	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S19-De29220	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S19-De29220	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S19-De29220	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S19-De29220	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S19-De29220	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S19-De29220	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S19-De29220	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S19-De29220	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S19-De29220	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S19-De29220	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S19-De29220	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-De29221	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-De29221	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-De29221	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-De29221	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-De29221	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-De29221	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-De29221	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-De29221	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-De29221	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29222	CP	mg/kg	5.0	5.4	8.0	30%	Pass	
Cadmium	S19-De29222	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29222	CP	mg/kg	7.3	7.5	4.0	30%	Pass	
Copper	S19-De29222	CP	mg/kg	14	14	<1	30%	Pass	
Lead	S19-De29222	CP	mg/kg	19	20	8.0	30%	Pass	
Mercury	S19-De29222	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29222	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-De29222	CP	mg/kg	71	76	7.0	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-De29226	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29229	CP	mg/kg	5.4	5.1	4.0	30%	Pass	
Cadmium	S19-De29229	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29229	CP	mg/kg	8.0	7.2	12	30%	Pass	
Copper	S19-De29229	CP	mg/kg	12	11	8.0	30%	Pass	
Lead	S19-De29229	CP	mg/kg	22	20	8.0	30%	Pass	
Mercury	S19-De29229	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29229	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-De29229	CP	mg/kg	70	90	25	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-De29446	CP	mg/kg	7.3	5.7	23	30%	Pass	
Cadmium	S19-De29446	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-De29446	CP	mg/kg	9.1	7.8	15	30%	Pass	
Copper	S19-De29446	CP	mg/kg	14	15	1.0	30%	Pass	
Lead	S19-De29446	CP	mg/kg	18	19	6.0	30%	Pass	
Mercury	S19-De29446	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-De29446	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-De29446	CP	mg/kg	38	41	9.0	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

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Gabriele Cordero	Senior Analyst-Inorganic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Julie Kay	Senior Analyst-Inorganic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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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.

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

Attention:	Sam Scully
Report	694811-AID
Project Name	MILPERRA
Project ID	9996
Received Date	Dec 19, 2019
Date Reported	Jan 08, 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.*

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.

Project Name MILPERRA
Project ID 9996
Date Sampled Dec 18, 2019
Report 694811-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH01_0.0-0.2	19-De29140	Dec 16, 2019	Approximate Sample 869g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH01_1.2-1.4	19-De29141	Dec 16, 2019	Approximate Sample 414g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH02_0.0-0.2	19-De29142	Dec 16, 2019	Approximate Sample 662g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH02_1.4-1.6	19-De29143	Dec 16, 2019	Approximate Sample 468g Sample consisted of: Brown coarse-grained clayey soil, bituminous material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH03_0.0-0.2	19-De29144	Dec 16, 2019	Approximate Sample 598g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH03_1.5-1.7	19-De29145	Dec 16, 2019	Approximate Sample 570g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH04_0.2-0.4	19-De29146	Dec 17, 2019	Approximate Sample 361g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH04_0.8-1.0	19-De29147	Dec 17, 2019	Approximate Sample 517g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH05_0.2-0.4	19-De29148	Dec 17, 2019	Approximate Sample 546g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH05_0.8-1.0	19-De29149	Dec 17, 2019	Approximate Sample 392g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH06_0.0.-0.2	19-De29150	Dec 17, 2019	Approximate Sample 608g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH06_0.5-0.7	19-De29151	Dec 17, 2019	Approximate Sample 326g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH07_0.0-0.2	19-De29152	Dec 17, 2019	Approximate Sample 602g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH08_0.0-0.2	19-De29154	Dec 18, 2019	Approximate Sample 698g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH08_0.5-0.7	19-De29155	Dec 18, 2019	Approximate Sample 427g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH11_0.0-0.2	19-De29157	Dec 16, 2019	Approximate Sample 476g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH16_0.0-0.2	19-De29160	Dec 16, 2019	Approximate Sample 975g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH17_0.0-0.2	19-De29161	Dec 16, 2019	Approximate Sample 1035g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH21_0.1-0.3	19-De29165	Dec 16, 2019	Approximate Sample 989g Sample consisted of: Brown coarse-grained soil, fragments of glass and rocks	FA: Chrysotile asbestos detected in weathered fibre cement material Approximate raw weight of FA = 0.0051g Estimated asbestos content in FA = 0.0020g* Total estimated asbestos concentration in FA = 0.00021% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH22_0.8-1.0	19-De29166	Dec 16, 2019	Approximate Sample 905g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH23_0.0-0.2	19-De29167	Dec 16, 2019	Approximate Sample 868g Sample consisted of: Brown coarse-grained soil, bituminous material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH28_0.0-0.2	19-De29170	Dec 16, 2019	Approximate Sample 993g Sample consisted of: Brown coarse-grained soil, cement, brick, fragments of glass and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH28_0.8-1.0	19-De29171	Dec 16, 2019	Approximate Sample 736g Sample consisted of: Brown coarse-grained clayey soil, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH29_0.0-0.2	19-De29172	Dec 16, 2019	Approximate Sample 589g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH34_0.0-0.2	19-De29177	Dec 16, 2019	Approximate Sample 413g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH35_0.0-0.2	19-De29178	Dec 16, 2019	Approximate Sample 766g Sample consisted of: Brown coarse-grained clayey soil, cement, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH36_0.0-0.2	19-De29179	Dec 16, 2019	Approximate Sample 560g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH36_1.0-1.2	19-De29180	Dec 16, 2019	Approximate Sample 971g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH37_0.3-0.5	19-De29182	Dec 16, 2019	Approximate Sample 729g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH38_0.0-0.2	19-De29183	Dec 16, 2019	Approximate Sample 960g Sample consisted of: Brown coarse-grained soil, brick, fragments of glass and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH50_0.2-0.4	19-De29184	Dec 17, 2019	Approximate Sample 866g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH57_0.2-0.4	19-De29188	Dec 17, 2019	Approximate Sample 475g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH59_0.0-0.05	19-De29190	Dec 17, 2019	Approximate Sample 1018g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH61_0.15-0.3	19-De29192	Dec 17, 2019	Approximate Sample 952g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH65_0.0-0.1	19-De29195	Dec 18, 2019	Approximate Sample 551g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH66_0.0-0.1	19-De29196	Dec 18, 2019	Approximate Sample 717g Sample consisted of: Brown coarse-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH68_0.0-0.1	19-De29200	Dec 18, 2019	Approximate Sample 751g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH71_0.0-0.2	19-De29202	Dec 17, 2019	Approximate Sample 413g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH72_0.0-0.2	19-De29203	Dec 17, 2019	Approximate Sample 500g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH74_0.0-0.2	19-De29205	Dec 17, 2019	Approximate Sample 358g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH77_0.0-0.2	19-De29208	Dec 16, 2019	Approximate Sample 751g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH81_0.2-0.4	19-De29212	Dec 17, 2019	Approximate Sample 611g Sample consisted of: Brown coarse-grained clayey soil, brick and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH89_0.0-0.2	19-De29219	Dec 18, 2019	Approximate Sample 561g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH92_0.0-0.2	19-De29220	Dec 18, 2019	Approximate Sample 767g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH97_0.0-0.2	19-De29222	Dec 18, 2019	Approximate Sample 505g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

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.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH101_0.0-0.2	19-De29224	Dec 18, 2019	Approximate Sample 392g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
FCS_59	19-De29236	not provided	Approximate Sample 9g / 75x55x5mm Sample consisted of: Yellow fibre cement sheet	Chrysotile asbestos detected.
FCS_101	19-De29237	not provided	Approximate Sample 11g / 50x45x5mm Sample consisted of: Grey fibre cement sheet	Chrysotile 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 19, 2019	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Dec 19, 2019	Indefinite

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
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NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
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Project ID: 9996

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Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	BH01_0.0-0.2	Dec 16, 2019		Soil	S19-De29140	X							X	X			X
2	BH01_1.2-1.4	Dec 16, 2019		Soil	S19-De29141	X			X				X	X	X		X
3	BH02_0.0-0.2	Dec 16, 2019		Soil	S19-De29142	X							X	X			X
4	BH02_1.4-1.6	Dec 16, 2019		Soil	S19-De29143	X							X	X			X
5	BH03_0.0-0.2	Dec 16, 2019		Soil	S19-De29144	X							X	X			X
6	BH03_1.5-1.7	Dec 16, 2019		Soil	S19-De29145	X			X				X	X	X		X
7	BH04_0.2-0.4	Dec 17, 2019		Soil	S19-De29146	X							X	X			X
8	BH04_0.8-1.0	Dec 17, 2019		Soil	S19-De29147	X							X	X			X
9	BH05_0.2-0.4	Dec 17, 2019		Soil	S19-De29148	X							X	X			X
10	BH05_0.8-1.0	Dec 17, 2019		Soil	S19-De29149	X							X	X			X

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Australia

Melbourne
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New Zealand

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
11	BH06_0.0.-0.2	Dec 17, 2019		Soil	S19-De29150	X							X	X			X
12	BH06_0.5-0.7	Dec 17, 2019		Soil	S19-De29151	X							X	X			X
13	BH07_0.0-0.2	Dec 17, 2019		Soil	S19-De29152	X							X	X			X
14	BH07_0.5-0.7	Dec 16, 2019		Soil	S19-De29153				X					X	X		
15	BH08_0.0-0.2	Dec 18, 2019		Soil	S19-De29154	X							X	X			X
16	BH08_0.5-0.7	Dec 18, 2019		Soil	S19-De29155	X							X	X			X
17	BH10_0.1-0.3	Dec 16, 2019		Soil	S19-De29156									X		X	
18	BH11_0.0-0.2	Dec 16, 2019		Soil	S19-De29157	X							X	X			X
19	BH14_0.0-0.2	Dec 16, 2019		Soil	S19-De29158									X		X	
20	BH15_0.0-0.2	Dec 16, 2019		Soil	S19-De29159									X		X	
21	BH16_0.0-0.2	Dec 16, 2019		Soil	S19-De29160	X							X	X			X
22	BH17_0.0-0.2	Dec 16, 2019		Soil	S19-De29161	X							X	X			X
23	BH18_0.2-0.4	Dec 16, 2019		Soil	S19-De29162									X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
24	BH19_0.0-0.2	Dec 16, 2019		Soil	S19-De29163									X		X	
25	BH20_0.0-0.15	Dec 16, 2019		Soil	S19-De29164									X		X	
26	BH21_0.1-0.3	Dec 16, 2019		Soil	S19-De29165	X							X	X			X
27	BH22_0.8-1.0	Dec 16, 2019		Soil	S19-De29166	X							X	X			X
28	BH23_0.0-0.2	Dec 16, 2019		Soil	S19-De29167	X							X	X			X
29	BH25_0.0-0.2	Dec 16, 2019		Soil	S19-De29168									X		X	
30	BH26_0.0-0.2	Dec 16, 2019		Soil	S19-De29169									X		X	
31	BH28_0.0-0.2	Dec 16, 2019		Soil	S19-De29170	X							X	X			X
32	BH28_0.8-1.0	Dec 16, 2019		Soil	S19-De29171	X							X	X			X
33	BH29_0.0-0.2	Dec 16, 2019		Soil	S19-De29172	X							X	X			X
34	BH30_0.0-0.2	Dec 16, 2019		Soil	S19-De29173									X		X	
35	BH31_0.0-0.2	Dec 16, 2019		Soil	S19-De29174									X		X	
36	BH32_0.0-0.2	Dec 16, 2019		Soil	S19-De29175									X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
37	BH33_0.0-0.2	Dec 16, 2019		Soil	S19-De29176									X		X	
38	BH34_0.0-0.2	Dec 16, 2019		Soil	S19-De29177	X								X		X	
39	BH35_0.0-0.2	Dec 16, 2019		Soil	S19-De29178	X							X	X			X
40	BH36_0.0-0.2	Dec 16, 2019		Soil	S19-De29179	X							X	X			X
41	BH36_1.0-1.2	Dec 16, 2019		Soil	S19-De29180	X							X	X			X
42	BH36_2.0-2.2	Dec 16, 2019		Soil	S19-De29181									X		X	
43	BH37_0.3-0.5	Dec 16, 2019		Soil	S19-De29182	X							X	X			X
44	BH38_0.0-0.2	Dec 16, 2019		Soil	S19-De29183	X								X		X	
45	BH50_0.2-0.4	Dec 17, 2019		Soil	S19-De29184	X							X	X			X
46	BH51_0.2-0.4	Dec 17, 2019		Soil	S19-De29185									X		X	
47	BH52_0.2-0.4	Dec 17, 2019		Soil	S19-De29186									X		X	
48	BH52_0.8-1.0	Dec 17, 2019		Soil	S19-De29187				X					X	X		
49	BH57_0.2-0.4	Dec 17, 2019		Soil	S19-De29188	X							X	X			X

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
50	BH58_0.2-0.4	Dec 17, 2019		Soil	S19-De29189									X		X	
51	BH59_0.0-0.05	Dec 17, 2019		Soil	S19-De29190	X								X		X	
52	BH60_0.0-0.2	Dec 17, 2019		Soil	S19-De29191									X		X	
53	BH61_0.15-0.3	Dec 17, 2019		Soil	S19-De29192	X							X	X			X
54	BH62_0.0-0.15	Dec 17, 2019		Soil	S19-De29193									X		X	
55	BH64_0.0-0.1	Dec 17, 2019		Soil	S19-De29194									X		X	
56	BH65_0.0-0.1	Dec 18, 2019		Soil	S19-De29195	X							X	X			X
57	BH66_0.0-0.1	Dec 18, 2019		Soil	S19-De29196	X							X	X			X
58	BH66_0.3-0.5	Dec 18, 2019		Soil	S19-De29197								X	X			X
59	BH66_1.0-1.2	Dec 18, 2019		Soil	S19-De29198									X		X	
60	BH67_0.0-0.05	Dec 18, 2019		Soil	S19-De29199									X		X	
61	BH68_0.0-0.1	Dec 18, 2019		Soil	S19-De29200	X							X	X			X
62	BH69_0.05-0.2	Dec 17, 2019		Soil	S19-De29201									X		X	

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
63	BH71_0.0-0.2	Dec 17, 2019		Soil	S19-De29202	X								X		X	
64	BH72_0.0-0.2	Dec 17, 2019		Soil	S19-De29203	X							X	X			X
65	BH73_0.0-0.2	Dec 17, 2019		Soil	S19-De29204									X		X	
66	BH74_0.0-0.2	Dec 17, 2019		Soil	S19-De29205	X							X	X			X
67	BH75_0.0-0.2	Dec 16, 2019		Soil	S19-De29206									X		X	
68	BH76_0.0-0.2	Dec 16, 2019		Soil	S19-De29207									X		X	
69	BH77_0.0-0.2	Dec 16, 2019		Soil	S19-De29208	X							X	X			X
70	BH78_0.0-0.2	Dec 16, 2019		Soil	S19-De29209									X		X	
71	BH79_0.0-0.2	Dec 16, 2019		Soil	S19-De29210									X		X	
72	BH80_0.0-0.2	Dec 17, 2019		Soil	S19-De29211									X		X	
73	BH81_0.2-0.4	Dec 17, 2019		Soil	S19-De29212	X							X	X			X
74	BH82_0.05-0.2	Dec 17, 2019		Soil	S19-De29213									X		X	
75	BH83_0.05-0.2	Dec 17, 2019		Soil	S19-De29214									X		X	

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Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
76	BH84_0.05-0.2	Dec 17, 2019		Soil	S19-De29215									X		X	
77	BH86_0.0-0.2	Dec 17, 2019		Soil	S19-De29216									X		X	
78	BH87_0.0-0.2	Dec 18, 2019		Soil	S19-De29217									X		X	
79	BH88_0.0-0.2	Dec 18, 2019		Soil	S19-De29218									X		X	
80	BH89_0.0-0.2	Dec 18, 2019		Soil	S19-De29219	X							X	X			X
81	BH92_0.0-0.2	Dec 18, 2019		Soil	S19-De29220	X							X	X			X
82	BH93_0.0-0.2	Dec 18, 2019		Soil	S19-De29221									X		X	
83	BH97_0.0-0.2	Dec 18, 2019		Soil	S19-De29222	X							X	X			X
84	BH100_0.2-0.4	Dec 17, 2019		Soil	S19-De29223									X		X	
85	BH101_0.0-0.2	Dec 18, 2019		Soil	S19-De29224	X								X		X	
86	DUP_01	Dec 16, 2019		Soil	S19-De29225					X	X			X			
87	DUP_02	Dec 16, 2019		Soil	S19-De29226					X	X			X			
88	DUP_03	Dec 17, 2019		Soil	S19-De29227					X	X			X			

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : 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

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: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: MILPERRA
Project ID: 9996

Order No.:
Report #: 694811
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Dec 19, 2019 5:02 PM
Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
89	DUP_04	Dec 18, 2019		Soil	S19-De29228					X	X			X			
90	DUP_14	Dec 18, 2019		Soil	S19-De29229					X	X			X			
91	TRIP SPIKE_16/12/19	Dec 16, 2019		Water	S19-De29230							X					
92	TRIP BLANK_16/12/19	Dec 16, 2019		Water	S19-De29231							X					
93	TRIP SPIKE_17/12/19	Dec 17, 2019		Water	S19-De29232							X					
94	TRIP BLANK_17/12/19	Dec 17, 2019		Water	S19-De29233							X					
95	TRIP SPIKE_18/12/	Dec 18, 2019		Water	S19-De29234							X					

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Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
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NATA # 1261 Site # 18217

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

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

New Zealand

Auckland
35 O'Rorke Road
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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
	SPIKE_18/12/19																
96	TRIP BLANK_18/12/19	Dec 18, 2019		Water	S19-De29235							X					
97	FCS_59	Not Provided		Building Materials	S19-De29236		X										
98	FCS_101	Not Provided		Building Materials	S19-De29237		X										
99	BH01_0.8-1.0	Dec 16, 2019		Soil	S19-De29250			X									
100	BH01_2.2-2.4	Dec 16, 2019		Soil	S19-De29251			X									
101	BH02_0.8-1.0	Dec 16, 2019		Soil	S19-De29252			X									
102	BH02_2.0-2.2	Dec 16, 2019		Soil	S19-De29253			X									
103	BH02_2.9-3.1	Dec 16, 2019		Soil	S19-De29254			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
104	BH03_0.8-1.0	Dec 16, 2019		Soil	S19-De29255			X									
105	BH03_2.3-2.5	Dec 16, 2019		Soil	S19-De29256			X									
106	BH03_3.3-3.5	Dec 16, 2019		Soil	S19-De29257			X									
107	BH05_1.3-1.5	Dec 17, 2019		Soil	S19-De29258			X									
108	BH07_1.4-1.6	Dec 17, 2019		Soil	S19-De29259			X									
109	BH08_1.4-1.6	Dec 18, 2019		Soil	S19-De29260			X									
110	BH10_0.7-0.9	Dec 16, 2019		Soil	S19-De29261			X									
111	BH11_0.2-0.4	Dec 16, 2019		Soil	S19-De29262			X									
112	BH14_0.2-0.4	Dec 16, 2019		Soil	S19-De29263			X									
113	BH15_0.2-0.4	Dec 16, 2019		Soil	S19-De29264			X									
114	BH16_0.8-1.0	Dec 16, 2019		Soil	S19-De29265			X									
115	BH16_2.4-2.6	Dec 16, 2019		Soil	S19-De29266			X									
116	BH17_0.8-1.0	Dec 16, 2019		Soil	S19-De29267			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
117	BH17_1.9-2.1	Dec 16, 2019		Soil	S19-De29268			X									
118	BH18_0.7-0.9	Dec 16, 2019		Soil	S19-De29269			X									
119	BH20_0.7-0.9	Dec 16, 2019		Soil	S19-De29270			X									
120	BH21_0.7-0.9	Dec 16, 2019		Soil	S19-De29271			X									
121	BH22_0.0-0.2	Dec 16, 2019		Soil	S19-De29272			X									
122	BH22_1.9-2.1	Dec 16, 2019		Soil	S19-De29273			X									
123	BH23_0.5-0.7	Dec 16, 2019		Soil	S19-De29274			X									
124	BH25_0.7-0.9	Dec 16, 2019		Soil	S19-De29275			X									
125	BH26_0.7-0.9	Dec 16, 2019		Soil	S19-De29276			X									
126	BH28_1.9-2.1	Dec 16, 2019		Soil	S19-De29277			X									
127	BH29_0.2-0.4	Dec 16, 2019		Soil	S19-De29278			X									
128	BH30_0.2-0.4	Dec 16, 2019		Soil	S19-De29279			X									
129	BH31_0.5-0.7	Dec 16, 2019		Soil	S19-De29280			X									

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NATA # 1261 Site # 18217

Brisbane
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Auckland
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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
130	BH32_0.5-0.7	Dec 16, 2019		Soil	S19-De29281			X									
131	BH33_0.3-0.5	Dec 16, 2019		Soil	S19-De29282			X									
132	BH35_0.8-1.0	Dec 16, 2019		Soil	S19-De29283			X									
133	BH37_0.8-1.0	Dec 16, 2019		Soil	S19-De29284			X									
134	BH38_0.7-0.9	Dec 16, 2019		Soil	S19-De29285			X									
135	BH50_0.8-1.0	Dec 17, 2019		Soil	S19-De29286			X									
136	BH51_0.8-1.0	Dec 17, 2019		Soil	S19-De29287			X									
137	BH57_0.8-1.0	Dec 17, 2019		Soil	S19-De29288			X									
138	BH58_0.8-1.0	Dec 17, 2019		Soil	S19-De29289			X									
139	BH59_0.1-0.3	Dec 17, 2019		Soil	S19-De29290			X									
140	BH60_0.2-0.4	Dec 17, 2019		Soil	S19-De29291			X									
141	BH61_0.7-0.9	Dec 17, 2019		Soil	S19-De29292			X									
142	BH62_0.2-0.4	Dec 17, 2019		Soil	S19-De29293			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
143	BH64_0.1-0.3	Dec 17, 2019		Soil	S19-De29294			X									
144	BH65_0.1-0.3	Dec 18, 2019		Soil	S19-De29295			X									
145	BH67_0.1-0.3	Dec 18, 2019		Soil	S19-De29296			X									
146	BH68_0.1-0.3	Dec 18, 2019		Soil	S19-De29297			X									
147	BH70_0.05-0.2	Dec 17, 2019		Soil	S19-De29298			X									
148	BH71_0.5-0.7	Dec 17, 2019		Soil	S19-De29299			X									
149	BH72_0.5-0.7	Dec 17, 2019		Soil	S19-De29300			X									
150	BH73_0.5-0.7	Dec 17, 2019		Soil	S19-De29301			X									
151	BH74_0.5-0.7	Dec 17, 2019		Soil	S19-De29302			X									
152	BH75_0.5-0.7	Dec 16, 2019		Soil	S19-De29303			X									
153	BH76_0.5-0.7	Dec 16, 2019		Soil	S19-De29304			X									
154	BH77_0.5-0.7	Dec 16, 2019		Soil	S19-De29305			X									
155	BH78_0.5-0.7	Dec 16, 2019		Soil	S19-De29306			X									

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Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
156	BH79_0.5-0.7	Dec 16, 2019		Soil	S19-De29307			X									
157	BH80_0.5-0.7	Dec 17, 2019		Soil	S19-De29308			X									
158	BH81_0.5-0.7	Dec 17, 2019		Soil	S19-De29309			X									
159	BH83_0.7-0.9	Dec 17, 2019		Soil	S19-De29310			X									
160	BH84_0.4-0.6	Dec 17, 2019		Soil	S19-De29311			X									
161	BH86_0.5-0.7	Dec 18, 2019		Soil	S19-De29312			X									
162	BH87_0.7-0.9	Dec 18, 2019		Soil	S19-De29313			X									
163	BH88_0.5-0.7	Dec 18, 2019		Soil	S19-De29314			X									
164	BH89_0.6-0.8	Dec 18, 2019		Soil	S19-De29315			X									
165	BH92_0.5-0.7	Dec 18, 2019		Soil	S19-De29316			X									
166	BH93_0.6-0.8	Dec 18, 2019		Soil	S19-De29317			X									
167	BH94_0.6-0.8	Dec 18, 2019		Soil	S19-De29318			X									
168	BH97_0.9-1.1	Dec 18, 2019		Soil	S19-De29319			X									

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Due: Jan 8, 2020
Priority: 10 Day
Contact Name: Sam Scully

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Eurofins | mgt Suite B15	Moisture Set	Cation Exchange Capacity	Eurofins | mgt Suite B7	Eurofins | mgt Suite B7A
Melbourne Laboratory - NATA Site # 1254 & 14271															X		
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794																	
Perth Laboratory - NATA Site # 23736																	
169	BH100_0.8-1.0	Dec 17, 2019		Soil	S19-De29320			X									
170	BH101_0.8-1.0	Dec 18, 2019		Soil	S19-De29321			X									
171	DUP10	Dec 17, 2019		Soil	S19-De29322			X									
172	DUP11	Dec 17, 2019		Soil	S19-De29323			X									
173	DUP12	Dec 16, 2019		Soil	S19-De29324			X									
174	DUP13	Dec 17, 2019		Soil	S19-De29325			X									
175	BH94_0.0-0.2	Dec 18, 2019		Soil	S19-De29446									X		X	
176	BH35_1.4-1.6	Dec 16, 2019		Soil	S19-De29449			X									
177	BH64_0.05-0.2	Dec 17, 2019		Soil	S19-De29450			X									
Test Counts						46	2	78	4	5	5	6	42	91	4	42	42

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

S19-De29141, S19-De29143, S19-De29146, S19-De29149, S19-De29151, S19-De29155, S19-De29177, S19-De29188, S19-De29202, S19-De29205, S19-De29224: Samples received were less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

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:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

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.

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ Sydney Laboratory
Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl, Murarrie, QLD 4172
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☐ Perth Laboratory
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08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully				
Handed over by	Sam Scully				
Email for Invoice	Enviro@allgeo.com.au				
Email for Results	Enviro@allgeo.com.au				

Analyses (Note: Where metals are requested please specify Total or Dissolved (dp). Filtration must be performed within 24hrs of sampling)

Containers

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Soil (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964 WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH01-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X										
2	BH01-0.8-1.0	16/12/19	Soil										X									
3	BH01-1.2-1.4	16/12/19	Soil	X	X	X	X	X	X	X	X	X										
4	BH01-2.2-2.4	16/12/19	Soil										X									
5	BH02-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X										
6	BH02-0.8-1.0	16/12/19	Soil																			
7	BH02-1.4-1.6	16/12/19	Soil	X	X		X	X	X	X	X	X										
8	BH02-2.0-2.2	16/12/19	Soil			X																
9	BH02-2.9-3.1	16/12/19	Soil																			
10	BH03-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X										
	Total Counts																					

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

Name: Sam Scully Signature: Date: 19-12-19 Time: 4:00pm

Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	19/12/19	Time	5:02 PM	Temperature 11.9°C
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	/ /	Time	:	Report № 694811

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Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses (Please tick which analyses are required / attach separate sheet. Mark any known hazards)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold
1	BH03-0.8-1.0	16/12/19	Soil										
2	BH03-1.5-1.7	16/12/19	Soil	X	X	X	X	X	X	X	X	X	
3	BH03-2.3-2.5	16/12/19	Soil										
4	BH03-3.3-3.5	16/12/19	Soil										
5	BH04-0.2-0.4	17/12/19	Soil	X	X		X	X	X	X	X	X	
6	BH04-0.8-1.0	17/12/19	Soil	X	X		X	X	X	X	X	X	
7	BH05-0.2-0.4	17/12/19	Soil	X	X		X	X	X	X	X	X	
8	BH05-0.8-1.0	17/12/19	Soil	X	X		X	X	X	X	X	X	
9	BH05-1.3-1.5	17/12/19	Soil										
10	BH06-0.0-0.2	17/12/19	Soil	X	X		X	X	X	X	X	X	
	Total Counts												

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964 WA Guidelines)

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

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

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

Name: Sam Scully Signature: Date: 19-12-19 Time: 4 : 00pm

Eurofins | mgt Laboratory Use Only

Received By: SYD | BNE | MEL | PER | ADL | NTL | DRW Signature: Date: 19/12/19 Time: Temperature:

Received By: SYD | BNE | MEL | PER | ADL | NTL | DRW Signature: Date: Time: Report №:

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Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
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* Surcharges apply
☐ Other ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Containers	Sample Comments / Dangerous Goods Hazard Warning
1	BH06-0.5-0.7	17/12/19	Soil	X	X		X	X	X	X	X	X			
2	BH07-0.0-0.2	17/12/19	Soil	X	X		X	X	X	X	X	X			
3	BH07-0.5-0.7	17/12/19	Soil			X									
4	BH07-1.4-1.6	17/12/19	Soil												
5	BH08-0.0-0.2	18/12/19	Soil	X	X		X	X	X	X	X	X			
6	BH08-0.5-0.7	18/12/19	Soil	X	X		X	X	X	X	X	X			
7	BH08-1.4-1.6	18/12/19	Soil												
8	BH10-0.1-0.3	16/12/19	Soil	X	X					X	X				
9	BH10-0.7-0.9	16/12/19	Soil												
10	BH11-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X			
	Total Counts														

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

Method of Shipment							
☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date 19-12-19	Time 4 : 00pm

Eurofins | mgt Laboratory Use Only									
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time :	Temperature		
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date / /	Time :	Report №		

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Phone №	400339745				
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Quote ID №					

Sampler(s)	Sam Scully
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Containers

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964 - WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH11-0.2-0.4	16/12/19	Soil																			
2	BH14-0.0-0.2	16/12/19	Soil	X	X					X	X											
3	BH14-0.2-0.4	16/12/19	Soil																			
4	BH15-0.0-0.2	16/12/19	Soil	X	X					X	X											
5	BH15-0.2-0.4	16/12/19	Soil																			
6	BH16-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X										
7	BH16-0.8-1.0	16/12/19	Soil																			
8	BH16-2.4-2.6	16/12/19	Soil																			
9	BH17-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X										
10	BH17-0.8-1.0	16/12/19	Soil																			
	Total Counts																					

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal | Name: Sam Scully | Signature: | Date: 16-12-19 | Time: 4:00pm

Eurofins | mgt Laboratory Use Only							
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date: 16/12/19	Time: :	Temperature
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date: / /	Time: :	Report №

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Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses (Please tick the analyses required and specify "Full Suite" or "Short Suite" where applicable. Please specify any particular analytical methods or detection limits required)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold
1	BH17-1.9-2.1	16/12/19	Soil										
2	BH18-0.2-0.4	16/12/19	Soil	X	X					X	X		
3	BH18-0.7-0.9	16/12/19	Soil										
4	BH19-0.0-0.2	16/12/19	Soil	X	X					X	X		
5	BH20-0.0-0.15	16/12/19	Soil	X	X					X	X		
6	BH20-0.7-0.9	16/12/19	Soil										
7	BH21-0.1-0.3	16/12/19	Soil	X	X		X	X	X	X	X	X	
8	BH21-0.7-0.9	16/12/19	Soil										
9	BH22-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
10	BH22-0.8-1.0	16/12/19	Soil	X	X		X	X	X	X	X	X	
	Total Counts												

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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

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

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date 19-12-19	Time 4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time :	Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date / /	Time :	Report №	

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Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
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Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully				
Handed over by	Sam Scully				
Email for Invoice	Enviro@allgeo.com.au				
Email for Results	Enviro@allgeo.com.au				

Analyses (Non-dissolved metals are inherently preserved by matrix. Dissolved metals must be field filtered prior to preservation. Refer to ALS guide)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold
1	BH22-1.9-2.1	16/12/19	Soil										
2	BH23-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
3	BH23-0.5-0.7	16/12/19	Soil										
4	BH25-0.0-0.2	16/12/19	Soil	X	X					X	X		
5	BH25-0.7-0.9	16/12/19	Soil										
6	BH26-0.0-0.2	16/12/19	Soil	X	X					X	X		
7	BH26-0.7-0.9	16/12/19	Soil										
8	BH28-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
9	BH28-0.8-1.0	16/12/19	Soil	X	X		X	X	X	X	X	X	
10	BH28-1.9-2.1	16/12/19	Soil										
	Total Counts												

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 - WA Guidelines)

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

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

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date 19-12-19 Time 4:00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time ___:___ Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date ___/___/___	Time ___:___ Report №

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ Sydney Laboratory
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02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Soil (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold
1	BH29-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
2	BH29-0.2-0.4	16/12/19	Soil										
3	BH30-0.0-0.2	16/12/19	Soil	X	X					X	X		
4	BH30-0.2-0.4	16/12/19	Soil										
5	BH31-0.0-0.2	16/12/19	Soil	X	X					X	X		
6	BH31-0.5-0.7	16/12/19	Soil										
7	BH32-0.0-0.2	16/12/19	Soil	X	X					X	X		
8	BH32-0.5-0.7	16/12/19	Soil										
9	BH33-0.0-0.2	16/12/19	Soil	X	X					X	X		
10	BH33-0.3-0.5	16/12/19	Soil										
	Total Counts												

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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

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

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date		Time	4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	19/12/19	Time		Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	

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☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

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Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Millperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses (Please mark in the box below to indicate required analysis. Specify "Trade" or "Filtered". Suite codes must be listed to ensure correct analysis)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold
1	BH34-0.0-0.2	16/12/19	Soil	X	X					X	X	X	
2	BH35-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
3	BH35-0.8-1.0	16/12/19	Soil										
4	BH36-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
5	BH36-1.0-1.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
6	BH36-2.0-2.2	16/12/19	Soil	X	X					X	X		
7	BH37-0.3-0.5	16/12/19	Soil	X	X		X	X	X	X	X	X	
8	BH37-0.8-1.0	16/12/19	Soil										
9	BH38-0.0-0.2	16/12/19	Soil	X	X					X	X	X	
10	BH38-0.7-0.9	16/12/19	Soil										
	Total Counts												

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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

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

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date	Time 4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time	:	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date / /	Time	:	Report №

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☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully	
Handed over by	Sam Scully	
Email for Invoice	Enviro@allgeo.com.au	
Email for Results	Enviro@allgeo.com.au	

Analyses (Note: Ammonia must be specified when Total N is selected. Please specify Total or Filtered fractions must be specified by ticking appropriate box)

Containers

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964 - WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH50-0.2-0.4	17/12/19	Soil	X	X		X	X	X	X	X	X										
2	BH50-0.8-1.0	17/12/19	Soil																			
3	BH51-0.2-0.4	17/12/19	Soil	X	X					X	X											
4	BH51-0.8-1.0	17/12/19	Soil																			
5	BH52-0.2-0.4	17/12/19	Soil	X	X					X	X											
6	BH52-0.8-1.0	17/12/19	Soil			X																
7	BH57-0.2-0.4	17/12/19	Soil	X	X		X	X	X	X	X	X										
8	BH57-0.8-1.0	17/12/19	Soil																			
9	BH58-0.2-0.4	17/12/19	Soil	X	X					X	X											
10	BH58-0.8-1.0	17/12/19	Soil																			
	Total Counts																					

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date 19-12-19 Time 4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date 19/12/19	Time	Temperature	
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №	

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☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other Asbestos AS4964 WA Guidelines

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	BH59-0.0-0.05	17/12/19	Soil	X	X					X	X	X		
2	BH59-0.1-0.3	17/12/19	Soil											
3	BH60-0.0-0.2	17/12/19	Soil	X	X					X	X			
4	BH60-0.2-0.4	17/12/19	Soil											
5	BH61-0.15-0.3	17/12/19	Soil	X	X		X	X	X	X	X	X		
6	BH61-0.7-0.9	17/12/19	Soil											
7	BH62-0.0-0.15	17/12/19	Soil	X	X					X	X			
8	BH62-0.2-0.4	17/12/19	Soil											
9	BH64-0.0-0.1	17/12/19	Soil	X	X					X	X			
10	BH64-0.1-0.3	17/12/19	Soil											
	Total Counts													

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal | Name: Sam Scully | Signature | Date: 19-12-19 | Time: 4:00pm

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Received By	Milperra	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date: 19/12/19	Time: :__	Temperature
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date: __/__/__	Time: :__	Report №

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☐ Perth Laboratory
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08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Containers: 1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964 - WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH65-0.0-0.1	18/12/19	Soil	X	X		X	X	X	X	X	X										
2	BH65-0.1-0.3	18/12/19	Soil																			
3	BH66-0.0-0.2	18/12/19	Soil	X	X		X	X	X	X	X	X										
4	BH66-0.3-0.5	18/12/19	Soil	X	X		X	X	X	X	X											
5	BH66-1.0-1.2	18/12/19	Soil	X	X					X	X											
6	~~BH67-0.5-0.9~~	~~18/12/19~~	~~Soil~~																			
7	BH67-0.0-0.05	18/12/19	Soil	X	X					X	X											
8	BH67-0.1-0.3	18/12/19	Soil																			
9	BH68-0.0-0.1	18/12/19	Soil	X	X		X	X	X	X	X	X										
10	BH68-0.1-0.3	18/12/19	Soil																			
	Total Counts																					

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal Name: Sam Scully Signature: Date: 19-12-19 Time: 4 : 00pm

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Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time __:__	Temperature
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date __/__/__	Time __:__	Report №

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☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses (Note: Where metals are to analyse, please specify "Total" or "Filtered". HOLD code must be used to avoid HOLD picking)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold
1	BH69-0.05-0.2	17/12/19	Soil	X	X					X	X		
2	BH70-0.05-0.2	17/12/19	Soil										
3	BH71-0.0-0.2	17/12/19	Soil	X	X					X	X	X	
4	BH71-0.5-0.7	17/12/19	Soil										
5	BH72-0.0-0.2	17/12/19	Soil	X	X		X	X	X	X	X	X	
6	BH72-0.5-0.7	17/12/19	Soil										
7	BH73-0.0-0.2	17/12/19	Soil	X	X					X	X		
8	BH73-0.5-0.7	17/12/19	Soil										
9	BH74-0.0-0.2	17/12/19	Soil	X	X		X	X	X	X	X	X	
10	BH74-0.5-0.7	17/12/19	Soil										
	Total Counts												

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other Asbestos AS4964 WA Guidelines

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

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

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal | Name: Sam Scully | Signature | Date: 19-12-19 | Time: 4:00pm

Eurofins | mgt Laboratory Use Only							
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date: 19/12/19	Time:	Temperature:
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date: __/__/__	Time:	Report №

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☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses (Note: Where metals are requested please specify "Total" or "Dissolved". SUITE codes must be listed to attract SUITE pricing)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold
1	BH75-0.0-0.2	16/12/19	Soil	X	X					X	X		
2	BH75-0.5-0.7	16/12/19	Soil										
3	BH76-0.0-0.2	16/12/19	Soil	X	X					X	X		
4	BH76-0.5-0.7	16/12/19	Soil										
5	BH77-0.0-0.2	16/12/19	Soil	X	X		X	X	X	X	X	X	
6	BH77-0.5-0.7	16/12/19	Soil										
7	BH78-0.0-0.2	16/12/19	Soil	X	X					X	X		
8	BH78-0.5-0.7	16/12/19	Soil										
9	BH79-0.0-0.2	16/12/19	Soil	X	X					X	X		
10	BH79-0.5-0.7	16/12/19	Soil										
	Total Counts												

Containers: 1L Plastic | 250mL Plastic | 125mL Amber Glass | 200mL VOA vial | 40mL PFAS Bottle | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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

- ☐ Overnight (9am)*
- ☐ 1 Day*
- ☐ 2 Day*
- ☐ 3 Day*
- ☒ 5 Day
- ☐ Other ( )

* Surcharges apply

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date 19-12-19	Time 4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date __/__/__	Time	Report №

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ Sydney Laboratory
Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Containers: 1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964 WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	BH80-0.0-0.2	17/12/19	Soil	X	X					X	X											
2	BH80-0.5-0.7	17/12/19	Soil																			
3	BH81-0.2-0.4	17/12/19	Soil	X	X		X	X	X	X	X	X										
4	BH81-0.5-0.7	17/12/19	Soil																			
5	BH82-0.05-0.2	17/12/19	Soil	X	X					X	X											
6	BH83-0.05-0.2	17/12/19	Soil	X	X					X	X											
7	BH83-0.7-0.9	17/12/19	Soil	[illegible]																		
8	BH84-0.05-0.2	17/12/19	Soil	X	X					X	X											
9	BH84-0.4-0.6	17/12/19	Soil																			
10	BH86-0.0-0.2	17/12/19	Soil	X	X					X	X											
	Total Counts																					

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

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

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date	19-12-19	Time 4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By	[illegible]	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	19/12/19	Time		Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	__/__/__	Time		Report №

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Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	BH86-0.5-0.7	18/12/19	Soil	✓						✓				
2	BH87-0.0-0.2	18/12/19	Soil	✓	✓					✓	✓			
3	BH87-0.7-0.9	18/12/19	Soil											
4	BH88-0.0-0.2	18/12/19	Soil	✓	✓					✓	✓			
5	BH88-0.5-0.7	18/12/19	Soil											
6	BH89-0.0-0.2	18/12/19	Soil	✓	✓		✓	✓	✓	✓	✓	✓		
7	BH89-0.6-0.8	18/12/19	Soil											
8	BH92-0.0-0.2	18/12/19	Soil	✓	✓		✓	✓	✓	✓	✓	✓		
9	BH92-0.5-0.7	18/12/19	Soil											
10	BH93-0.0-0.2	18/12/19	Soil	✓	✓					✓	✓			
	Total Counts													

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date 19-12-19 Time 4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time	Temperature
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date __/__/__	Time	Report №

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☐ Perth Laboratory — Unit 2, 91 Leach Highway, Kewdale WA 6105 — 08 9251 9600 — EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory — 2 Kingston Town Close, Oakleigh, VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964 WA Guidelines)

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	BH93-0.6-0.8	18/12/19	Soil											
2	BH94-0.0-0.2	18/12/19	Soil	X	X					X	X			
3	BH94-0.6-0.8	18/12/19	Soil											
4	BH97-0.0-0.2	18/12/19	Soil	X	X		X	X	X	X	X	X		
5	BH97-0.9-1.1	18/12/19	Soil											
6	BH100-0.2-0.4	17/12/19	Soil	X	X					X	X			
7	BH100-0.8-1.0	17/12/19	Soil											
8	BH101-0.0-0.2	18/12/19	Soil	X	X					X	X	X		
9	BH101-0.8-1.0	18/12/19	Soil											
10	DUP-01	16/12/19	Soil	X	X									
	Total Counts													

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature	Date 19-12-19 Time 4:00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19 Time :	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date / / Time :	Report №

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☐ Melbourne Laboratory
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03 8564 5000 EnviroSampleVic@eurofins.com

Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully				
Handed over by	Sam Scully				
Email for invoice	Enviro@allgeo.com.au				
Email for Results	Enviro@allgeo.com.au				

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

Turnaround Time (TAT) Requirements (Overnight will be 5 days if not advised)

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Soil (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	DUP-1A	16/12/19	Soil	X	X									Please forward to ALS
2	DUP-02	16/12/19	Soil	X	X									
3	DUP-2A	16/12/19	Soil	X	X									Please forward to ALS
4	DUP-03	17/12/19	Soil	X	X									
5	DUP-3A	17/12/19	Soil	X	X									Please forward to ALS
6	DUP-04	18/12/19	Soil	X	X									
7	DUP-4A	18/12/19	Soil	X	X									Please forward to ALS
8	DUP-10	17/12/19	Soil											
9	DUP-10A	17/12/19	Soil											Please forward to ALS
10	DUP-11	17/12/19	Soil											
	Total Counts													

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date	19-12-19	Time	4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	19/12/19	Time		Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	

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Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964 WA Guidelines)

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

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

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Soil (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Sample Comments / Dangerous Goods Hazard Warning
1	DUP-11A	16/12/19	Soil											Please forward to ALS
2	DUP-12	16/12/19	Soil											
3	DUP-12A	16/12/19	Soil											Please forward to ALS
4	DUP-13	17/12/19	Soil											
5	DUP-13A	17/12/19	Soil											Please forward to ALS
6	DUP-14	18/12/19	Soil	X	X									
7	DUP-14A	18/12/19	Soil	X	X									Please forward to ALS
8	TRIP SPIKE	16/12/19	Soil								X			
9	TRIP BLANK	16/12/19	Soil								X			
10	TRIP SPIKE	17/12/19	Soil								X			
	Total Counts													

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date	19-12-19	Time	4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	19/12/19	Time		Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	/ /	Time	:	Report №	

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Company	ALLIANCE GEOTECHNICAL	Project №	9996	Project Manager	Sam Scully
Address	10 WELDER ROAD, SEVEN HILLS NSW	Project Name	Milperra	EDD Format (ESdat, EQuIS, Custom)	
Contact Name	Sam Scully				
Phone №	400339745				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Sam Scully
Handed over by	Sam Scully
Email for Invoice	Enviro@allgeo.com.au
Email for Results	Enviro@allgeo.com.au

Analyses (Note: Where metals are requested, please specify 'Total' or 'Filtered'. Filtered to be performed in the laboratory unless otherwise specified)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	8 Metals	PAH	CEC / pH	OCP/OPP	PCB	Phenols	TRH	BTEX	ASBESTOS (0.001%)	Hold	Asbestos 1 D
1	TRIP BLANK	17/12/19	WATER								X			
2	TRIP SPIKE	18/12/19	WATER								X			
3	TRIP BLANK	18/12/19	WATER								X			
4	FCS-59		Frog										X	
5	FCS-101		Frog										X	
6														
7														
8														
9														
10														
	Total Counts													

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL VOA vial | 500mL PFAS Bottle | Jar (Glass or HDPE) | Other (Asbestos AS4964 WA Guidelines)

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

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

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Sam Scully	Signature		Date 19-12-9	Time 4 : 00pm
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 19/12/19	Time	Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report №	

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APPENDIX H

ProUCL OUTPUT

DRAFT

1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.124/01/2020 1:55:57 PM										
5	From File	WorkSheet.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**Nickel - ProUCL**											
12												
13	**General Statistics**											
14	Total Number of Observations	137			Number of Distinct Observations	53						
15					Number of Missing Observations	0						
16	Minimum	5			Mean	8.806						
17	Maximum	73			Median	5.6						
18	SD	8.257			Std. Error of Mean	0.705						
19	Coefficient of Variation	0.938			Skewness	4.507						
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic	0.528			**Shapiro Wilk GOF Test**							
23	5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic	0.322			**Lilliefors GOF Test**							
25	5% Lilliefors Critical Value	0.0761			Data Not Normal at 5% Significance Level							
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**							
30	95% Student's-t UCL	9.974			95% Adjusted-CLT UCL (Chen-1995)	10.26						
31					95% Modified-t UCL (Johnson-1978)	10.02						
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic	15.69			**Anderson-Darling Gamma GOF Test**							
35	5% A-D Critical Value	0.761			Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic	0.262			**Kolmogorov-Smirnov Gamma GOF Test**							
37	5% K-S Critical Value	0.0806			Data Not Gamma Distributed at 5% Significance Level							
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)	2.704			k star (bias corrected MLE)	2.649						
42	Theta hat (MLE)	3.257			Theta star (bias corrected MLE)	3.324						
43	nu hat (MLE)	740.8			nu star (bias corrected)	725.9						
44	MLE Mean (bias corrected)	8.806			MLE Sd (bias corrected)	5.41						
45					Approximate Chi Square Value (0.05)	664.4						
46	Adjusted Level of Significance	0.0482			Adjusted Chi Square Value	663.8						
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))	9.621			95% Adjusted Gamma UCL (use when n<50)	9.63						
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic	0.732			**Shapiro Wilk Lognormal GOF Test**							

53	5% Shapiro Wilk P Value				0	Data Not Lognormal at 5% Significance Level						
54	Lilliefors Test Statistic				0.245	**Lilliefors Lognormal GOF Test**						
55	5% Lilliefors Critical Value				0.0761	Data Not Lognormal at 5% Significance Level						
56	**Data Not Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59	Minimum of Logged Data				1.609	Mean of logged Data						1.979
60	Maximum of Logged Data				4.29	SD of logged Data						0.535
61												
62	**Assuming Lognormal Distribution**											
63	95% H-UCL				9.089	90% Chebyshev (MVUE) UCL						9.558
64	95% Chebyshev (MVUE) UCL				10.11	97.5% Chebyshev (MVUE) UCL						10.88
65	99% Chebyshev (MVUE) UCL				12.38							
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data do not follow a Discernible Distribution (0.05)**											
69												
70	**Nonparametric Distribution Free UCLs**											
71	95% CLT UCL				9.966	95% Jackknife UCL						9.974
72	95% Standard Bootstrap UCL				9.993	95% Bootstrap-t UCL						10.46
73	95% Hall's Bootstrap UCL				10.68	95% Percentile Bootstrap UCL						10.03
74	95% BCA Bootstrap UCL				10.44							
75	90% Chebyshev(Mean, Sd) UCL				10.92	95% Chebyshev(Mean, Sd) UCL						11.88
76	97.5% Chebyshev(Mean, Sd) UCL				13.21	99% Chebyshev(Mean, Sd) UCL						15.82
77												
78	**Suggested UCL to Use**											
79	95% Chebyshev (Mean, Sd) UCL				11.88							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												

1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.124/01/2020 1:29:32 PM										
5	From File	WorkSheet.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**TRH >C10-C16 (F2) - ProUCL**											
12												
13	**General Statistics**											
14	Total Number of Observations	135			Number of Distinct Observations	7						
15					Number of Missing Observations	0						
16	Minimum	50			Mean	53.52						
17	Maximum	210			Median	50						
18	SD	19.37			Std. Error of Mean	1.667						
19	Coefficient of Variation	0.362			Skewness	6.128						
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic	0.203			**Shapiro Wilk GOF Test**							
23	5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic	0.528			**Lilliefors GOF Test**							
25	5% Lilliefors Critical Value	0.0766			Data Not Normal at 5% Significance Level							
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**							
30	95% Student's-t UCL	56.28			95% Adjusted-CLT UCL (Chen-1995)	57.2						
31					95% Modified-t UCL (Johnson-1978)	56.43						
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic	48.72			**Anderson-Darling Gamma GOF Test**							
35	5% A-D Critical Value	0.751			Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic	0.533			**Kolmogorov-Smirnov Gamma GOF Test**							
37	5% K-S Critical Value	0.0803			Data Not Gamma Distributed at 5% Significance Level							
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)	17.03			k star (bias corrected MLE)	16.66						
42	Theta hat (MLE)	3.142			Theta star (bias corrected MLE)	3.213						
43	nu hat (MLE)	4599			nu star (bias corrected)	4498						
44	MLE Mean (bias corrected)	53.52			MLE Sd (bias corrected)	13.11						
45					Approximate Chi Square Value (0.05)	4343						
46	Adjusted Level of Significance	0.0482			Adjusted Chi Square Value	4341						
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))	55.43			95% Adjusted Gamma UCL (use when n<50)	55.45						
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic	0.207			**Shapiro Wilk Lognormal GOF Test**							

53	5% Shapiro Wilk P Value				0	Data Not Lognormal at 5% Significance Level						
54	Lilliefors Test Statistic				0.531	**Lilliefors Lognormal GOF Test**						
55	5% Lilliefors Critical Value				0.0766	Data Not Lognormal at 5% Significance Level						
56	**Data Not Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59	Minimum of Logged Data				3.912	Mean of logged Data						3.95
60	Maximum of Logged Data				5.347	SD of logged Data						0.201
61												
62	**Assuming Lognormal Distribution**											
63	95% H-UCL				54.6	90% Chebyshev (MVUE) UCL						55.79
64	95% Chebyshev (MVUE) UCL				57.05	97.5% Chebyshev (MVUE) UCL						58.8
65	99% Chebyshev (MVUE) UCL				62.23							
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data do not follow a Discernible Distribution (0.05)**											
69												
70	**Nonparametric Distribution Free UCLs**											
71	95% CLT UCL				56.26	95% Jackknife UCL						56.28
72	95% Standard Bootstrap UCL				56.2	95% Bootstrap-t UCL						58.14
73	95% Hall's Bootstrap UCL				56.43	95% Percentile Bootstrap UCL						56.39
74	95% BCA Bootstrap UCL				57.44							
75	90% Chebyshev(Mean, Sd) UCL				58.52	95% Chebyshev(Mean, Sd) UCL						60.79
76	97.5% Chebyshev(Mean, Sd) UCL				63.93	99% Chebyshev(Mean, Sd) UCL						70.11
77												
78	**Suggested UCL to Use**											
79	95% Student's-t UCL				56.28	or 95% Modified-t UCL						56.43
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												

1	**UCL Statistics for Uncensored Full Data Sets**											
2												
3	User Selected Options											
4	Date/Time of Computation	ProUCL 5.124/01/2020 2:01:58 PM										
5	From File	WorkSheet_a.xls										
6	Full Precision	OFF										
7	Confidence Coefficient	95%										
8	Number of Bootstrap Operations	2000										
9												
10												
11	**TRH >C16-C34 (F3) - ProUCL**											
12												
13	**General Statistics**											
14	Total Number of Observations	135			Number of Distinct Observations	22						
15					Number of Missing Observations	0						
16	Minimum	100			Mean	152.1						
17	Maximum	1800			Median	100						
18	SD	188.3			Std. Error of Mean	16.21						
19	Coefficient of Variation	1.238			Skewness	6.277						
20												
21	**Normal GOF Test**											
22	Shapiro Wilk Test Statistic	0.332			**Shapiro Wilk GOF Test**							
23	5% Shapiro Wilk P Value	0			Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic	0.391			**Lilliefors GOF Test**							
25	5% Lilliefors Critical Value	0.0766			Data Not Normal at 5% Significance Level							
26	**Data Not Normal at 5% Significance Level**											
27												
28	**Assuming Normal Distribution**											
29	**95% Normal UCL**				**95% UCLs (Adjusted for Skewness)**							
30	95% Student's-t UCL	179			95% Adjusted-CLT UCL (Chen-1995)	188.2						
31					95% Modified-t UCL (Johnson-1978)	180.4						
32												
33	**Gamma GOF Test**											
34	A-D Test Statistic	30.76			**Anderson-Darling Gamma GOF Test**							
35	5% A-D Critical Value	0.762			Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic	0.377			**Kolmogorov-Smirnov Gamma GOF Test**							
37	5% K-S Critical Value	0.0812			Data Not Gamma Distributed at 5% Significance Level							
38	**Data Not Gamma Distributed at 5% Significance Level**											
39												
40	**Gamma Statistics**											
41	k hat (MLE)	2.504			k star (bias corrected MLE)	2.453						
42	Theta hat (MLE)	60.76			Theta star (bias corrected MLE)	62.02						
43	nu hat (MLE)	676.1			nu star (bias corrected)	662.4						
44	MLE Mean (bias corrected)	152.1			MLE Sd (bias corrected)	97.14						
45					Approximate Chi Square Value (0.05)	603.7						
46	Adjusted Level of Significance	0.0482			Adjusted Chi Square Value	603.1						
47												
48	**Assuming Gamma Distribution**											
49	95% Approximate Gamma UCL (use when n>=50))	166.9			95% Adjusted Gamma UCL (use when n<50)	167.1						
50												
51	**Lognormal GOF Test**											
52	Shapiro Wilk Test Statistic	0.5			**Shapiro Wilk Lognormal GOF Test**							

53	5% Shapiro Wilk P Value				0	Data Not Lognormal at 5% Significance Level						
54	Lilliefors Test Statistic				0.38	**Lilliefors Lognormal GOF Test**						
55	5% Lilliefors Critical Value				0.0766	Data Not Lognormal at 5% Significance Level						
56	**Data Not Lognormal at 5% Significance Level**											
57												
58	**Lognormal Statistics**											
59	Minimum of Logged Data				4.605	Mean of logged Data						4.812
60	Maximum of Logged Data				7.496	SD of logged Data						0.495
61												
62	**Assuming Lognormal Distribution**											
63	95% H-UCL				150.3	90% Chebyshev (MVUE) UCL						157.7
64	95% Chebyshev (MVUE) UCL				166.2	97.5% Chebyshev (MVUE) UCL						178
65	99% Chebyshev (MVUE) UCL				201.1							
66												
67	**Nonparametric Distribution Free UCL Statistics**											
68	**Data do not follow a Discernible Distribution (0.05)**											
69												
70	**Nonparametric Distribution Free UCLs**											
71	95% CLT UCL				178.8	95% Jackknife UCL						179
72	95% Standard Bootstrap UCL				178.5	95% Bootstrap-t UCL						203.9
73	95% Hall's Bootstrap UCL				273.3	95% Percentile Bootstrap UCL						179.9
74	95% BCA Bootstrap UCL				189.9							
75	90% Chebyshev(Mean, Sd) UCL				200.8	95% Chebyshev(Mean, Sd) UCL						222.8
76	97.5% Chebyshev(Mean, Sd) UCL				253.4	99% Chebyshev(Mean, Sd) UCL						313.4
77												
78	**Suggested UCL to Use**											
79	95% Student's-t UCL				179	or 95% Modified-t UCL						180.4
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												

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