



**Bass Coast Shire Council**  
Phase 1 Preliminary Site Investigation  
Wonthaggi Precinct Structure Plan - North East Growth Area

May 2019

# Executive summary

GHD Pty Ltd. (GHD) was engaged by Bass Coast Shire Council (Council) in August 2018 to conduct preliminary site investigations at properties located in the Wonthaggi north east growth area that were previously identified as having a 'high' potential for contamination. GHD completed a preliminary desktop review of the land within the proposed precinct structure plan in 2015-2016 as part of a preliminary screening activity. The desktop reviews were completed in order to evaluate whether detailed site investigations or environmental audit overlays were required for the properties investigated. The Victorian Planning Authority (VPA) reviewed the GHD 2016 report and considered that further information was required to evaluate the need for an environmental audit overlay.

## Background information

GHD completed a Contaminated Land Investigation (CLI) report in, dated April 2016 (GHD 2016). The GHD 2016 investigation comprised a high level desktop review of historical and publically available information and visual observations of the study area from publically accessible locations to determine a risk ranking for each property within the study area. The risk rankings were determined as high, medium or low for having potential for contamination (PFC) as per the Department of Sustainability and Environment (DSE), Potentially Contaminated Land: General Practice Note (DSE 2005). The GHD 2016 report identified sixteen properties rated as 'high' risk and recommended that an environmental audit overlay (EAO) or equivalent planning mechanism be applied to those sixteen properties to require an environmental audit to be completed prior to redevelopment to sensitive use. Having reviewed the report, the VPA indicated that further environmental assessment was required for the properties with 'high' potential for contamination.

## Purpose

The purpose of this preliminary site investigation was to gather more information related to potential for contamination for properties previously identified as having a 'high' potential for contamination in the GHD 2016 report.

## Property descriptions

Based on the information provided to GHD by Council, two of sixteen properties were not required to be further assessed:

- Property 41 is a current Ausnet electricity substation which will remain as such.
- Property 113, which has been excised from the PSP.

Additionally, details of the owner of property 67 were not provided and therefore property 67 was not included as part of this assessment.

The properties assessed during this investigation included thirteen properties that were previously deemed to have 'high' potential for contamination. The properties are summarised below.

| Property No. | Lot and Plan Number                   |
|--------------|---------------------------------------|
| 34           | Lot 1 Plan LP211687                   |
| 35           | Lot 2 Plan LP211687                   |
| 36           | Lot 1 Plan TP129892                   |
| 37           | Lot 1 Plan PS648351                   |
| 38           | Lot 1 Plan LP74840                    |
| 39           | Lot 1 Plan PS531086                   |
| 40           | Lot 2 Plan PS531086                   |
| 60-65        | Plan CP172891 and Lot 14 Plan LP11690 |

## Discussion

Targeted intrusive investigations were conducted at properties 38 and 40 to evaluate areas of concern identified during the site inspections. Debris was identified in the fill soil at a location of a former dam at property 38 and at a location of a former building at property 40. Based on the samples submitted for analysis, asbestos-containing materials were not present in the debris. According to the results of the targeted intrusive investigations conducted at the areas of concern at properties 38 and 40, the risk ratings are considered to be 'low'.

A targeted intrusive investigation was conducted at property 36 to evaluate an area of concern identified during the site inspection. Based on the targeted intrusive investigation, hydrocarbon contamination is present on the eastern portion of the property. The hydrocarbon impacts have been delineated vertically but not horizontally, and additional intrusive investigations are required to determine soil and groundwater quality at property 36. Based on the targeted intrusive investigation conducted at property 36, the risk ratings is considered to be 'medium'.

This preliminary assessment has considered further information obtained from each site and the results of the previous desktop assessment (GHD 2016). Using DSE 2005, Potentially Contaminated Land, General Practice Note, the following ratings have been assigned:

| Property No. | Previous PFC Rating (GHD 2016) | Revised PFC Rating (GHD 2019) |
|--------------|--------------------------------|-------------------------------|
| 34           | High                           | High                          |
| 35           | High                           | High                          |
| 36           | High                           | Medium                        |
| 37           | High                           | High                          |
| 38           | High                           | Low                           |
| 39           | High                           | High                          |
| 40           | High                           | Low                           |
| 60-65*       | High                           | High                          |

### Notes:

\* As stated in the GHD 2016 report, the properties remaining as industrial land use can be downgraded to a medium PFC rating.

As the majority of the properties are proposed for predominantly sensitive uses (residential, school, community and open space use) the PFC ratings translate directly to the following assessment levels in accordance with the DSE 2005, Potentially Contaminated Land, General Practice Note:

- High PFC Rating = Assessment Level 'A' required
- Medium PFC Rating = Assessment Level 'B' required
- Low PFC Rating = Assessment Level 'C' required.

The assessment levels are summarised below:

- Assessment Level 'A' properties - An Environmental Audit Overlay (or equivalent planning mechanism) should be applied to the properties to make sure the requirements of an environmental audit are met prior to redevelopment to sensitive residential or associated land use. The need for an environmental audit may be either confirmed or the PFC rating reduced if additional assessment is conducted and findings warrant the modification.
- Assessment Level 'B' properties – a Phase 1 environmental site assessment (ESA) (including comprehensive site inspections with access to locked structures) should be completed on these properties, specifically in those areas identified in the Study as containing specific PAoC. It is noted that a targeted ESA of these properties to evaluate the identified PAoC could be required and may either increase or reduce the PFC ratings and consequently the requirement for additional intrusive investigations.

If a Phase 2 ESA was recommended following completion of the Phase 1 ESA, the level of investigation required could vary significantly between properties across the study area, depending on their size and identified potential contamination issues.

- Assessment Level 'C' properties – no further works are recommended for these properties, unless evidence of potentially contaminating activities or sources of contamination are identified at a later date. However, the site owner still retains a general duty under Section 12(2)(b) and Section 60(1)(a)(iii) of the Planning and Environment Act 1987.

## **Recommendations**

It is recommended that detailed environmental site assessments be undertaken at properties 34, 35, 37, 39 and 60 to 65 prior to development of the properties to evaluate the areas of potential contamination through the collection of further information such as soil and groundwater quality. It is noted that targeted ESAs to evaluate the identified areas of concern may either increase or reduce the PFC ratings and consequently the requirement for additional intrusive investigations or an EAO.

No further works are considered necessary for properties 38 and 40, unless evidence of potentially contaminating activities or sources of contamination are identified at a later date.

*This report is subject to, and must be read in conjunction with, the limitations set out in Section 1.5 and the assumptions and qualifications contained throughout the Report.*



# Table of contents

|     |                                                                                                              |    |
|-----|--------------------------------------------------------------------------------------------------------------|----|
| 1.  | Introduction .....                                                                                           | 1  |
| 1.1 | Background .....                                                                                             | 1  |
| 1.2 | Purpose .....                                                                                                | 2  |
| 1.3 | Objective .....                                                                                              | 2  |
| 1.4 | Scope.....                                                                                                   | 3  |
| 1.5 | Limitations .....                                                                                            | 3  |
| 2.  | Review of previous reports .....                                                                             | 5  |
| 2.1 | GHD, April 2016 – Wonthaggi North East Growth Area Planning Studies,<br>Contaminated Land Investigation..... | 5  |
| 3.  | Information review .....                                                                                     | 7  |
| 3.1 | EPA licence register .....                                                                                   | 7  |
| 4.  | Assessment criteria .....                                                                                    | 8  |
| 4.1 | Soil assessment guidelines .....                                                                             | 9  |
| 5.  | Site inspections .....                                                                                       | 10 |
| 5.1 | Methodology for site inspections and interviews .....                                                        | 10 |
| 5.2 | Results of site inspections and interviews .....                                                             | 10 |
| 6.  | Preliminary surface soil investigation .....                                                                 | 14 |
| 6.1 | Methodology of surface soil sampling .....                                                                   | 14 |
| 6.2 | Preliminary soil investigation discussion .....                                                              | 18 |
| 7.  | Targeted intrusive investigation .....                                                                       | 22 |
| 7.1 | Methodology .....                                                                                            | 22 |
| 7.2 | Targeted Intrusive Investigation Discussion .....                                                            | 24 |
| 8.  | Conclusions .....                                                                                            | 26 |
| 9.  | Recommendations .....                                                                                        | 28 |
| 10. | References .....                                                                                             | 29 |

# Table index

|          |                                                                                |    |
|----------|--------------------------------------------------------------------------------|----|
| Table 1  | Summary of potential sources of contamination leading to high PFC rating ..... | 6  |
| Table 2  | DSE 2005 – Assessment matrix .....                                             | 8  |
| Table 3  | Summary of property owners/occupiers .....                                     | 10 |
| Table 4  | Property inspection details.....                                               | 11 |
| Table 5  | Summary of soil sampling and location rationale.....                           | 14 |
| Table 6  | Summary of surface soil sampling and laboratory analysis.....                  | 15 |
| Table 7  | Summary of soil sample lithology and surface observations .....                | 16 |
| Table 8  | Analytes exceeding applicable guidelines .....                                 | 17 |
| Table 9  | Summary of areas of concern .....                                              | 21 |
| Table 10 | Summary of soil lithology and test pit observations .....                      | 23 |
| Table 11 | Analytes exceeding applicable guidelines .....                                 | 24 |
| Table 12 | PFC ratings .....                                                              | 26 |

# Appendices

|                                                                    |
|--------------------------------------------------------------------|
| Appendix A – Figures                                               |
| Appendix B – Tables                                                |
| Appendix C – Precinct structure plan and property planning reports |
| Appendix D – Assessment of applicable criteria                     |
| Appendix E – Photographic log                                      |
| Appendix F – Laboratory analytical report                          |
| Appendix G – Test pit logs                                         |
| Appendix H – QA/QC assessment                                      |

# 1. Introduction

GHD Pty Ltd. (GHD) was engaged by Bass Coast Shire Council (Council) in August 2018 to conduct preliminary site investigations at properties located in the Wonthaggi north east growth area that were previously identified as having a 'high' potential for contamination. GHD completed a preliminary desktop review of the land within the proposed precinct structure plan in 2015-2016 as part of a preliminary screening activity. The desktop reviews were completed in order to evaluate whether detailed site investigations or environmental audit overlays were required for the properties investigated. The Victorian Planning Authority (VPA) reviewed the GHD 2016 report and considered that further information was required to evaluate the need for an environmental audit overlay.

The preliminary site investigations were carried out for the purpose agreed between GHD and Council as set out in GHD proposal 310925038-75926 dated 24 August 2018 to provide information on the current and historical settings of the properties and was limited to the scope of works as outlined in Section 1.4.

## 1.1 Background

The properties investigated during this assessment are located in the Bass Coast Shire of south east Victoria and are part of the expansion of the Wonthaggi Township. A site location map is provided in Appendix A, Figure 1.

GHD completed a Contaminated Land Investigation (CLI) report in April 2016 (GHD 2016). The GHD 2016 investigation comprised a high level desktop review of historical and publically available information and visual observations of the study area from publically accessible locations to determine a risk ranking for each property with the study. The risk rankings were determined as high, medium or low for having potential for contamination (PFC) as per the Department of Sustainability and Environment (DSE), Potentially Contaminated Land: General Practice Note (DSE 2005). The GHD 2016 report identified sixteen properties rated as 'high' risk and recommended that an environmental audit overlay (EAO) or equivalent planning mechanism be applied to those sixteen properties to require an environmental audit to be completed prior to redevelopment to sensitive use (refer Section 2.1). Having reviewed the report the VPA has indicated that further environmental assessment was required for the properties with 'high' potential for contamination.

Based on the information provided to GHD by Council, two of sixteen properties were not required to be further assessed:

- Property 41 is a current Ausnet electricity substation which will remain as such.
- Property 113, which has been excised from the PSP.

Additionally, the contact information for the owner of property 67 was not provided and therefore was not included as part of this assessment.

Therefore, the properties assessed during this investigation included thirteen properties that were previously deemed to have 'high' potential for contamination.

It should be noted that of the thirteen properties:

- Seven properties (Property No. 34 to 40) are proposed for sensitive use (e.g. residential, community facilities like a childcare centre), educational use (e.g. school) or public open space use (e.g. sports reserve, playground) and includes the proposed 'Village Hub' as shown in the VPA Plan 3 – Future Urban Structure to be located within Property No. 40.
- Six properties (Property N. 60 to 65) located near the corner of Carneys Road and Bass Highway are currently used for industrial purposes and they are proposed to remain for industrial use (i.e. not sensitive use) in the PSP.

Ministerial Direction No. 1 - Potentially Contaminated Land of the Planning and Environment Act 1987 (Ministerial Direction No.1 1987) applies to potentially contaminated land and that a planning authority must:

*“ensure that potentially contaminated land is suitable for a use which is proposed to be allowed under an amendment to a planning scheme, and which could be significantly adversely affected by any contamination” [Planning and Environment Act 1987; Section 12 (2) (a)].*

The DSE, Potentially Contaminated Land - General Practice Note, 2005 requires that:

*“planning authorities must satisfy themselves that the environmental conditions of land proposed to be used for a sensitive use (designed as residential, child-care centre, pre-school centre or primary school), agriculture or public open space are, or will be, suitable for that use.”*

Based on the above directives and requirements for the Wonthaggi north east growth area, GHD has conducted preliminary site investigations of the thirteen properties to further assess the potential for contamination.

Accordingly, prior to application of an EAO, Council may wish to implement planning controls (such as requiring additional assessment phases to confirm the findings of this assessment). This may involve the use of a planning scheme trigger(s) for further assessment of properties identified as having 'high' or 'medium' potential for contamination. Properties deemed as having a 'low' potential for contamination indicate that no further works are recommended, unless evidence of potentially contaminating activities or sources of contamination are identified at a later date.

This Phase 1 preliminary site investigation has been completed to inform decision makers regarding development of the Wonthaggi north east growth area and the precinct structure plan (PSP). The current Wonthaggi PSP named Plan 3 – Future Urban Structure provided to GHD by Council is available in Appendix C.

## **1.2 Purpose**

The purpose of this preliminary site investigation was to refine the assessment for potential contamination for properties previously identified as having a 'high' potential for contamination in the GHD 2016 report.

## **1.3 Objective**

The objective of this preliminary site investigation was to review the previously obtained and newly collected information to assess the potential for contamination at the properties and determine if detailed site investigations or EAOs are required.

## 1.4 Scope

The investigation was undertaken using a staged approach for the thirteen properties identified with high potential for contamination. The first stage was a preliminary site investigation as follows:

- Review of previous data collected by GHD and other publically available information.
- Inspection of the properties.
- Interview with site owners or occupiers regarding history of the properties and current management practices.
- Collection of limited surface soil samples based on visual observations or in a spatial distribution.

The second stage was a targeted intrusive investigation based on stage 1 observations and included the following:

- Advancement of test pits in areas of concern at properties 36, 38 and 40.
- Soil sample collection from the test pit excavations.
- Sediment sample collection from the drainage canal at property 38 and 40.
- Preparation of this report based on the results of the site investigations.

This investigation did not include dangerous goods database searches, cathodic protection database searches or comprehensive soil and groundwater investigation. Hazardous materials surveys were not completed for the buildings in the study area. Fill materials and buildings constructed prior to 2003 may contain asbestos or asbestos-containing material (ACM). .

## 1.5 Limitations

*This letter has been prepared by GHD Pty Ltd ("GHD") for Bass Coast Shire Council and may only be used and relied on by Bass Coast Shire Council for the purpose agreed between GHD and the Bass Coast Shire Council. GHD otherwise disclaims responsibility to any person other than Bass Coast Shire Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.*

*This report is not to be used for the purposes of handling soil during development works and may not be used for the purpose of categorising soil material currently on site in accordance with EPA Victoria Guidelines. Should soil categorisation in accordance with EPA Victoria Guidelines be required, further assessment will be necessary and in accordance with applicable guidelines.*

*The services undertaken by GHD in connection with preparing this report were limited to those detailed in the agreed scope of work and are subject to the scope limitations set out in the report.*

*The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of this report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.*

*The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Conditions at other parts of the properties may be different from the conditions found at the specific sample points. Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.*

*The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD as provided throughout the report. GHD disclaims liability arising from any of the assumptions being incorrect.*

*GHD has prepared this report on the basis of information provided by Bass Coast Shire Council and others who provided information to GHD (including property owners and occupiers), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.*



## 2. Review of previous reports

GHD completed a previous assessment for Council named *Contaminated Land Investigation, Wonthaggi North East Growth Area Planning Studies*, dated April 2016. A brief summary of this assessment is provided below.

### 2.1 GHD, April 2016 – Wonthaggi North East Growth Area Planning Studies, Contaminated Land Investigation

GHD was engaged by Council in 2015 to undertake a Contaminated Land Investigation (CLI) for the broader Wonthaggi North East Growth Area to inform the development of a Precinct Structure Plan for the study area to be included into the Bass Coast Planning Scheme. The study area in the GHD 2016 report comprised approximately 640 hectares and incorporated 113 properties that bound the township of Wonthaggi to the north and east.

The purpose of the CLI was to assess the potential for land contamination across the study area based on historical and current land uses and provide Council an understanding of specific areas that require further investigation. The CLI included:

- Desktop review of published soil, geology and hydrogeology conditions, including survey, mapping and other base data as available from relevant authority and agency data sets and maps.
- Review of current and historical aerial photography records for the study area and surrounds (where available) to assist in establishing the physical patterns of development over time.
- Review of historical land titles for selected properties.
- Consultation with Wonthaggi Historical Society and a limited review of the Pioneers on the Powlett River and at Wonthaggi (1878-1910).
- Compilation of known groundwater borehole locations and use as listed on the Victorian groundwater database.
- Review of Wetlands databases and sites of National Environmental Significance.
- Review of Australian Heritage Databases specifically for historic uses.
- Consultation with relevant agencies as required including:
  - Environment Protection Authority (EPA) for review of records including the 'Priority Sites Registry' and the list of issued 'Certificates and Statements of Environmental Audit.
  - Council regarding known land uses and previous planning permits in the study area as well as surrounding properties, where relevant.
  - Council to obtain copies of relevant information relating to current ownership and any other relevant data.
- Preparation of a report detailing the findings of the desktop study and assessing the findings against the criteria within Tables 1 and 2 in the DSE 2005, Potentially Contaminated Land, General Practice Note with respect to the need for application of an EAO to all or parts of the study area.

Visual inspections of the properties, as seen from publicly accessible locations, were also conducted to confirm desktop study results.

The CLI was a risk screening activity with limited scope and did not include, hazardous goods searches, cathodic protection searches, collecting of soil or groundwater samples or interviews with site owners.

Based on the results of the CLI, GHD was able to:

- Indicate where key potential areas of concern may exist and the chemicals of potential concern.
- Allocate all properties within the study area with an initial high, medium or low potential for contamination (PFC) rating in relation to land contamination; and
- Provide recommendations on the need for further assessment of land within the study area, guided by the initial PFC rating.

Of the 113 properties reviewed as part of the CLI, 16 properties were rated 'high' for potential of contamination including property numbers 34 – 41, 60 – 65, 67 and 113. The following table summarises the potential sources of contamination that led the properties being assessed a high PFC rating.

**Table 1 Summary of potential sources of contamination leading to high PFC rating**

| Property No. | Potential sources of contamination                                                                                                                                                                                                                                                                     |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 34           | Possible abattoir, machinery related contaminants, fill material, chemical / fuel storage, process related contaminants, fertilisers, herbicides, pesticides, scrap metals, soil stockpiles, aboveground storage tanks                                                                                 |
| 35           | Possible abattoir, machinery related contaminants, chemical / fuel storage, process related contaminants, fill, wash-down areas                                                                                                                                                                        |
| 36           | Possible abattoir, machinery related contaminants, process related contaminants, fill, pesticides/herbicides                                                                                                                                                                                           |
| 37           | Possible abattoir, machinery related contaminants, chemical / fuel storage, pesticides/herbicides                                                                                                                                                                                                      |
| 38           | Possible abattoir, dam filled in with fill soil, removed structures, machinery related contaminants, chemical / fuel storage, fill, fertilizers, pesticides/herbicides<br>Potential for accumulation and/or concentration of contaminants (associated with agricultural land use) in drainage channels |
| 39           | Possible abattoir, machinery related contaminants, chemical / fuel storage, septic tanks, pesticides, fill soil.                                                                                                                                                                                       |
| 40           | Possible abattoir, machinery related contaminants, chemical / fuel storage, nutrients, pesticides<br>Potential for accumulation and/or concentration of contaminants (associated with agricultural land use) in drainage channels                                                                      |
| 60 - 65      | Machinery related contaminants, spray painting, chemical / fuel storage, waste oil storage, bulk fuel storage, process related contaminants, wash down area, interceptor traps                                                                                                                         |

It is noted that whilst all the sites indicate a possible abattoir, this is based on review of land titles where the relevant parcel (property 39) was large and identified as having "butcher" or "Abattoir" and has subsequently been subdivided, as such the history is transferred across all land parcels. It is not expected that all parcels actually had an abattoir, and is more likely limited to the identified abattoir on parcel 39 (refer Table 4 in Section 5.2).

## 3. Information review

GHD undertook a review of publically available information for the properties including Victorian EPA records and was limited to the scope defined in Section 1.4.

Property planning reports for the assessed properties collected from the DELWP online database are provided in Appendix C.

GHD notes that the property owners interviewed as part of this assessment had no previous environmental assessments available for review regarding contamination status of the properties.

The following sections summarise the results of the information review.

### 3.1 EPA licence register

An EPA Licence is required for all 'scheduled premises', unless the premises are exempt from the regulations. Licences cover the actual operation of the site and set operating conditions, waste discharge limits, and waste acceptance conditions as appropriate. EPA maintains a database of Licences.

A search of the database on 16 October 2018 indicated that no licences were listed for Wonthaggi in the municipality of Bass Coast Shire Council. However, the database may not include records dating back to the early 1900s for when abattoirs were expected to be located in the study area.

## 4. Assessment criteria

This Phase 1 Preliminary Site Investigation was completed in general accordance with the following:

- National Environmental Protection (Assessment of Site Contamination) Measure (NEPM), 1999 as amended in 2013
- Australian and New Zealand Environmental and Conservation Council (ANZECC), Guidelines for the Assessment and Management of Contaminated Sites, 1992
- Ministerial Direction No. 1 – Potentially Contaminated Land (made under Section 12(2)(a) Planning & Environment Act 1987)
- Standards Australia, Australian Standard AS4482.1 - Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, 2005
- Victorian Environmental Protection Agency (VIC EPA), State Environment Protection Policy - Prevention and Management of Contamination of Land, 2002
- Victorian Environmental Protection Agency (VIC EPA), State Environment Protection Policy - Groundwaters of Victoria, 1997
- Victorian Department of Sustainability and Environment (VIC DSE), Potentially Contaminated Land - General Practice Note, 2005

The DSE 2005 General Practice Note provides the following assessment matrix based on proposed land uses which directs the PFC ratings for this assessment of the Wonthaggi North East Growth Area.

**Table 2 DSE 2005 – Assessment matrix**

| Proposed Land Use                                                                                                                                                                                                                                                                                                                                                                                                                                             | Potential for Contamination |        |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------|-----|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                               | High                        | Medium | Low |
| <b>Sensitive Uses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         |                             |        |     |
| Child care centre, pre-school or primary school                                                                                                                                                                                                                                                                                                                                                                                                               | A                           | B      | C   |
| Dwellings, residential buildings, etc.                                                                                                                                                                                                                                                                                                                                                                                                                        | A                           | B      | C   |
| <b>Other Uses</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |        |     |
| Open Space                                                                                                                                                                                                                                                                                                                                                                                                                                                    | B                           | C      | C   |
| Agriculture                                                                                                                                                                                                                                                                                                                                                                                                                                                   | B                           | C      | C   |
| Retail or office                                                                                                                                                                                                                                                                                                                                                                                                                                              | B                           | C      | C   |
| Industry or warehouse                                                                                                                                                                                                                                                                                                                                                                                                                                         | B                           | C      | C   |
| <b>Notes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                             |        |     |
| A: Require an environmental audit as required by Ministerial Direction No. 1 or the Environmental Audit Overlay when a planning scheme amendment or planning permit application would allow a sensitive use to establish on potentially contaminated land. An environmental audit is also strongly recommended by the SEPP where a planning permit application would allow a sensitive use to be established on land with 'high potential' for contamination. |                             |        |     |
| B: Require a site assessment from a suitably qualified environmental professional if insufficient information is available to determine if an audit is appropriate. If advised that an audit is not required, default to C.                                                                                                                                                                                                                                   |                             |        |     |
| C: General duty under Section 12(2)(b) and Section 60(1) of the Planning and Environment Act 1987.                                                                                                                                                                                                                                                                                                                                                            |                             |        |     |

## 4.1 Soil assessment guidelines

The Victorian Government, *State Environment Protection Policy (SEPP)* (Prevention and Management of Contaminated Land) (Land SEPP) provides beneficial uses to be protected under a number of different land use scenarios, and provides indicators and objectives for protection of land.

The proposed uses of the study properties were provided to GHD in the Victorian Planning Authority (VPA) Plan 3 – Future Urban Structure: Wonthaggi Precinct Structure Plan. Based on the proposed development of the properties to include residential, school, community facilities and open space use, GHD adopted the land use of 'sensitive use' as defined in the Land SEPP which includes residential use and assumes substantial access to soil. A detailed explanation of the applicable soil assessment guidelines is provided in Appendix D.

In accordance with the Land SEPP, the protected beneficial uses associated with the proposed land use are:

- Maintenance of ecosystems (modified ecosystems).
- Human health.
- Buildings and structures.
- Aesthetics.
- Production of flora and fauna.

The following criteria were adopted to assess the soil contamination status of the properties:

- NEPM 1999 (as amended 2013) Generic Ecological Investigation Levels for Arsenic, DDT and naphthalene, and Added Contaminant Limits adopted as conservative EILs (without adjustment for site-specific soil quality parameters).
- NEPM 1999 (as amended 2013) Ecological Screening Levels.
- NEPM 1999 (as amended 2013) Health Investigation Levels: Residential (HIL A).
- NEPM 1999 (as amended 2013) Health Screening Levels: Residential (HSL A / B).
- NEPM 1999 (as amended 2013) Management Limits for Petroleum Hydrocarbons.

## 5. Site inspections

### 5.1 Methodology for site inspections and interviews

Site inspections of the properties were conducted by a suitably qualified and experienced environmental engineer. The property numbers used in this report are referenced from the GHD 2016 CLI report for continuation purposes and the actual lot or parcel numbers for the properties may differ.

Based on information provided by Council, the properties were owned and/or occupied by five parties as detailed in Table 3 below. GHD interviewed the property owners or occupiers to inquire about past practises, buildings and structures currently or previously present at the property, and activities undertaken on the properties.

**Table 3 Summary of property owners/occupiers**

| Site owners                                          | Property No.  |
|------------------------------------------------------|---------------|
| Shane Townsend (owner)                               | 34, 35 and 37 |
| Select Produce Pty Ltd (occupier) - snowpea facility | 36            |
| Gerry Van Damme (owner)                              | 38            |
| Bob and Stuart Edden (owner)                         | 39 and 40     |
| Greg Klun (owner)                                    | 60 – 65       |

The site inspections comprised of:

- Observations of visual and olfactory evidence of contamination (e.g. patch of bare ground or dead vegetation, staining from spills)
- Photographs of the site and surrounding properties
- Interview with site owners or occupiers for information including, but not limited to, current and historical use of the property, waste management practices and underground storage tanks
- Documentation of site inspection outcomes in site inspection checklists

Prior to commencing fieldwork, GHD prepared a job safety and environmental analysis (JSEA) to manage the safety aspects of the site inspections. The site assessor reviewed the JSEA prior to starting work and carried out the requirements of the JSEA at all times.

It is assumed that disturbed ground observed to be present on properties within the study area is either reworked soil sourced from the property on which it was observed or fill imported from an offsite location. If fill material has been imported onto these properties at any time, or if any buildings constructed prior to 2003 have been demolished on these properties, it is considered that contaminants including (but not limited to) lead and asbestos or asbestos-containing material (ACM) may be present.

### 5.2 Results of site inspections and interviews

GHD conducted the site inspections and interviews in conjunction with limited surface soil sampling on 12 and 13 September 2018. The results of the site inspection and interviews is discussed in the following sections. The following table provides a description of the individual properties based on the interviews with property owners and/or occupiers and the site inspections.

**Table 4 Property inspection details**

| Property No. | Property inspection details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| 34           | <p>Property number 34, with address 30 Oates Road, North Wonthaggi, is listed as Lot 1, Plan LP211687 and is approximately 19,000 square metres (m<sup>2</sup>) (1.9 hectares [ha]) in size and contained one building located on the northern portion of the property. The building is a warehouse/shop building used for storage of various items including equipment and automotive parts. The property appeared to be used for vehicle maintenance and storage of vehicles, transport trailers, various equipment and supplies. Temporary buildings, including a mobile home and trailer unit, and unused farm structures are also located on the northeastern portion of the property. Storage areas are located on the northern and western portions of the property. At the time of the site inspection, rubbish was present in the storage areas such as broken down vehicles and vehicle parts, scrap metal, and concrete. Evidence of burning of waste material was present at the property.</p> <p>Spills of oil from truck maintenance activities were present on the concrete apron and gravel surface near the southern portion of the shop building. Buckets of used oil were present in this area. Waste generated at the property was reportedly taken off-site for disposal. No evidence of underground or aboveground storage tanks for used oil storage was present at the time of the site inspection and the property owner was not aware of underground storage tanks at the property for waste storage. Oil jugs and buckets of used oil were present in the storage yard. A drainage trench leading to a pit and drain pipe was present at the southeastern portion of the shop building. The pipe appeared to drain into the surface of the east adjacent property.</p> <p>The site owner reported that the property was historically a farmstead used for raising horse and cattle as well as a plant nursery for a short time. The property owner was not aware of the operation of an abattoir at the property in the past based on his knowledge of the site.</p> |
| 35           | <p>Property number 35, with address 26 Oates Road, North Wonthaggi, is listed as Lot 2, Plan LP211687 and is approximately 20,000 m<sup>2</sup> (2.0 ha) in size and contained one residential building located on the northern portion of the property. A concrete slab located on the southwestern portion of the property indicates the location of a former garage building that was reportedly torn down in recent years. The eastern portion of the property was vacant and used as pasture land. The property owner was not aware of the operation of an abattoir at the property in the past based on his knowledge of the site.</p> <p>The site was overgrown with vegetation at the time of the site inspection and a couple empty drums were located near the concrete slab. Soil stockpiles were present along the southern boundary of the site indicating fill soil may have been brought onto the site. An apparent cellar was present to the east of the concrete slab. The property owner reported that the cellar was filled in as it was not used.</p> <p>The site owner reported that a dam was formerly located on the southwestern portion of the site but was filled in with clay soil and compacted in approximately 2008.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 36           | <p>Property number 36, listed as Lot 1, Plan TP129892, is approximately 17,500 m<sup>2</sup> (1.75 ha) in size and contained one building in the central portion of the property. The property and building was reportedly used on a seasonal basis for the storage and distribution of snow peas. The northeastern portion of the site was used by a local supply company for the storage of fire wood. The western portion of the property was vacant and undeveloped.</p> <p>Buckets, jugs and a drum of lubricating oil and two pallets of dry chemical in bags were present inside the storage building. No evidence of significant spills or releases were observed inside the storage building.</p> <p>A storage area for vehicle parts and a drum for the apparent storage of used oil was observed on the eastern portion of the site, adjacent to the storage building. Staining was observed on the gravel surface of the site.</p> <p>At the time of the site inspection, rubbish was present on the southeastern boundary of the site which included broken down vehicles, scrap metal, appliances and building materials. Three empty steel drums and a plastic tank was observed in this area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Property No. | Property inspection details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 37           | <p>Property number 37, listed as Lot 1, Plan PS648351, is approximately 38,000 m<sup>2</sup> (3.8 ha) in size. The property was vacant and used as pasture land. The property owner was not aware of the operation of an abattoir at the property in the past based on his knowledge of the site.</p> <p>A drain pipe was present on the northwestern boundary of the site which appeared to connect to the adjacent property to the west (property number 34). Leaks and spills from the adjacent workshop building could collect in a pit on property 34 and drain onto the surface of property 37.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 38           | <p>Property number 38, listed as Lot 1, Plan LP74840, is approximately 46.9 ha in size. The property was vacant and used as pasture land. The property owner stated that the property has only been used for agricultural uses including pasture for cattle as well as snow pea farming for a short time. The property owner was not aware of the operation of an abattoir at the property in the past based on his knowledge of the site.</p> <p>A drainage channel was present on the western portion of the property.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 39           | <p>Property number 39, listed as Lot 1 Plan PS531086 and is approximately 18,000 m<sup>2</sup> (1.8 ha) in size and contained five buildings. A residential building was located on the southern portion of the site with a shop building, garage and covered car park adjacent to the northeast. A milking shed was located on the northern portion of the property. A dilapidated building was located on the northwestern portion of the site and reportedly used in the past by an abattoir. Three sheds were observed on the property for the storage of various equipment. The northwestern portion of the property was reportedly used by a local business for storage of imported fill materials such as sand and gravel.</p> <p>At the time of the site inspection, rubbish was present at various locations on the property and included vehicles and farm equipment, automotive parts, chemical drums and buckets, household items and scrap metal.</p> <p>Spills and releases of oil were observed at various locations of the property. The property owner reported that a release of diesel fuel occurred on the eastern portion of the property near the milking shed.</p> <p>A diesel fuel AST is located at the property and is currently used for the fuelling of vehicles. The AST was approximately 10,000 L in capacity and appeared to be in good condition at the time of the site inspection. Secondary containment was not present around the AST. Minor staining was visible on the gravel surface near the AST.</p> <p>The property owner stated that an abattoir was historically operated at the property approximately 90 years ago.</p> |
| 40           | <p>Property number 40, listed as Lot 2, Plan PS531086, is approximately 78.6 ha in size. The property was vacant and used as pasture land. The property owner stated that the property has only been used for agricultural uses including pasture for cattle as well as snow pea farming for a short time. The site owner reported that manure was historically spread over the field for fertilization purposes. The property owner was not aware of the operation of an abattoir at the property in the past based on his knowledge of the site. However, an abattoir was reportedly operated at the farmstead property located adjacent to the west.</p> <p>A hay shed was formerly located on the northeastern portion of the property. A dam was located on the southwestern portion of the site for water storage and a drainage channel was located on the western portion of the property.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



| Property No. | Property inspection details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 60-65        | <p>Property number 60 to 65, currently listed as Lot 14 Plan LP11690 and Plan CP172891, is approximately 10,300 m<sup>2</sup> (1.0 ha) in size and contains seven buildings. Three businesses are located on the northern portion of the property including Greg's Panels, an automotive repair shop, Carline Mufflers, an automotive mechanic shop, and Sheetmetal Mechanical Services, a metal products fabricator/supplier. A dry-floor paint booth is located in a shop building located south of Greg's Panels repair shop. The remaining buildings on the property are generally used for storage of various equipment and repair of automobiles.</p> <p>Wastes generated at the on-site businesses is reportedly taken off-site for disposal. No disposal of wastes was reportedly conducted at the property. At the time of the site inspection, rubbish was present at various locations on the property and included damaged vehicles, heavy equipment, automotive parts and scrap metal.</p> <p>The property owner stated that the site was previously used as a storage site for drums of fuel supplies. The drums were reportedly stored on a dock prior to shipment off-site.</p> <p>A former underground storage tank (UST) was reportedly located on the northern portion of the property and was removed prior to the current owner's possession date in approximately the late-1990s. No additional information was provided regarding assessment or removal of the UST.</p> |

A photographic log showing the state of the properties at the time of the site inspections is provided in Appendix E.

## 6. Preliminary surface soil investigation

### 6.1 Methodology of surface soil sampling

Surface soil sampling was conducted at seven properties (Property No. 34 to 40) on 12 and 13 September 2018. Locations for surface sampling were based on visual observations at the time of the site inspection and focussed on properties that were proposed for sensitive, educational or public open space use. Surface soil sample locations are shown on Figure 2 in Appendix A.

A total of 26 surface soil samples from a maximum depth of 0.2 metres (m) below ground surface (bgs) were collected at potential areas of concern with a hand trowel. The locations of underground services were avoided by requesting utility service plans from the Dial Before You Dig online service. The location and lithology of the surface soil samples were recorded and the observed lithology is summarised in Section 6.1.2, Table 7.

The soil sampling was conducted using GHD's Quality Assurance and Quality Control (QA/QC) procedures with regards to sampling methodology and equipment decontamination. All samples were placed in new glass jars specially prepared and provided with caps and Teflon liners. All sampling equipment was cleaned and washed using phosphate free Decon 90 and deionised water between each sampling location.

Once collected, the samples were immediately placed in ice chests and chilled with ice for transport to the nominated National Association of Testing Authorities (NATA) accredited laboratory. Chain of custody (COC) documentation was prepared for sample transfer to the laboratory.

It should be noted that as the sampling is part of a preliminary investigation, the number of samples and the QA/QC measures (e.g. field duplicate, rinsate blank and trip blank samples) was not in full compliance with National Environmental Protection (Assessment of Site Contamination) Measure (NEPM), 1999 as amended 2013 and Australian Standard AS4482.1, 2005. The QA/QC assessment for the surface soil sampling is provided in Appendix H.

Rationales for each soil sampling location are provided in Table 5 below.

**Table 5 Summary of soil sampling and location rationale**

| Property No. | Sample ID | Rationale for location of surface sample collection                                                               |
|--------------|-----------|-------------------------------------------------------------------------------------------------------------------|
| 34           | SS01      | Location of potential on-site burning of waste.                                                                   |
|              | SS02      | Area of surface staining from spills of used oil.                                                                 |
|              | SS03      | Location where inferred drainage of surface water based on topography and potential accumulation of contaminants. |
| 35           | SS06      | Location near former garage building and area where observed chemical drums on the surface of the property.       |
|              | SS07      | Location of potentially imported stockpiled soil.                                                                 |
| 36           | SS19      | Location near chemical drums apparently disposed of on the surface of the property.                               |
|              | SS20      | Area of surface staining from apparent storage of used oil and automotive parts.                                  |
|              | SS21      | General location of agriculture and cattle grazing, potential application of pesticides.                          |

| Property No. | Sample ID | Rationale for location of surface sample collection                                                                                           |
|--------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 37           | SS04      | Location of apparent discharge of contaminants from a drain pipe originating from the west adjacent property.                                 |
|              | SS05      | General location of agriculture and cattle grazing, potential application of pesticides.                                                      |
| 38           | SS22      | General location of agriculture and cattle grazing, potential application of pesticides.                                                      |
|              | SS23      |                                                                                                                                               |
|              | SS24      |                                                                                                                                               |
|              | SS25      |                                                                                                                                               |
|              | SS26      |                                                                                                                                               |
| 39           | SS08      | Location near the dispensing of diesel fuel from AST. Area of minor surface staining.                                                         |
|              | SS09      | Area of significant surface staining and reported location of diesel fuel spill.                                                              |
|              | SS10      | Location of chemical drums, oil parts disposal area, and various rubbish storage. Surface staining and oily product present in surface soils. |
| 40           | SS11      | General location of agriculture and cattle grazing, potential application of pesticides.                                                      |
|              | SS12      | General location of agriculture and cattle grazing, potential application of pesticides. Location of proposed community hub.                  |
|              | SS13      |                                                                                                                                               |
|              | SS14      |                                                                                                                                               |
|              | SS15      |                                                                                                                                               |
|              | SS16      | General location of agriculture and cattle grazing, potential application of pesticides. Location of former hay shed.                         |
|              | SS17      | General location of agriculture and cattle grazing, potential application of pesticides.                                                      |
|              | SS18      | General location of agriculture and cattle grazing, potential application of pesticides. Location of proposed community hub.                  |

### 6.1.1 Soil sample analysis

With consideration of the potential contaminants of concern listed in Table 3 of Appendix I of the 'Contaminated Land Investigation' (GHD 2016) report, the proposed laboratory analysis for the 26 surface soil samples is summarised in Table 6 below.

**Table 6 Summary of surface soil sampling and laboratory analysis**

| Property No. | Number of soil samples | Analytical suite                   |
|--------------|------------------------|------------------------------------|
| 34           | 1                      | NEPM suite                         |
|              | 2                      | TRH, BTEXN, 8 metals, OCP/OPP      |
| 35           | 1                      | NEPM suite                         |
|              | 1                      | TRH, BTEXN, PAH, phenols, 8 metals |
| 36           | 1                      | NEPM suite                         |
|              | 2                      | TRH, BTEXN, 8 metals, OCP/OPP      |
| 37           | 1                      | NEPM suite                         |

| Property No.                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Number of soil samples | Analytical suite                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                      | TRH, BTEXN, PAH, phenols, 8 metals |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1                      | NEPM suite                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4                      | TRH, BTEXN, 8 metals, OCP/OPP      |
| 39                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1                      | NEPM suite                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                      | TRH, BTEXN, 8 metals, OCP/OPP      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                      | TRH, BTEXN, PAH, 8 metals          |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                      | NEPM suite                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6                      | TRH, BTEXN, 8 metals, OCP/OPP      |
| <b>Notes:</b><br>TRH: Total recoverable hydrocarbons<br>BTEXN: Benzene, toluene, ethylbenzene, xylenes and naphthalene<br>OCP: Organochlorine pesticide<br>OPP: Organophosphorus pesticide<br>PAH: Polycyclic aromatic hydrocarbons<br>PCB: Polychlorinated biphenyl<br>8 Metals: As, Cd, Cr, Cu, Ni, Pb, Zn, Hg<br>NEPM suite: 15 metals (As, B, Ba, Be, Cd, Cr, Co, Cu, Mn, Ni, Pb, Se, V, Zn, Hg); Cr VI; WAD cyanide; organics;<br>TRH; BTEXN; PAHs, phenols and PCBs. |                        |                                    |

### 6.1.2 Soil sample lithology and observations

The observed lithology of each soil sample and relevant observations are detailed in the Table 7 below.

**Table 7 Summary of soil sample lithology and surface observations**

| Sample No. | Property No. | Lithology                                                                                       | Observations                                                           |
|------------|--------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| SS01       | 34           | SAND, some gravel, some silt, loose, moist, brown to black, organics, ash                       | Sample collected near potential burn pit and rubbish storage           |
| SS02       |              | Gravelly SAND, trace silt, compact, damp, brown to black, hydrocarbon odour                     | Parking area and drive way, surface staining                           |
| SS03       |              | CLAY, trace gravel, trace silt, olive to dark brown, medium plasticity, stiff, no odours        | Excavation area                                                        |
| SS04       | 37           | CLAY, with silt, trace sand, dark brown, moist to wet, high plasticity, firm, organics/rootlets | Sample collected near drainage pipe discharge                          |
| SS05       |              | CLAY, with silt, trace sand, dark brown, moist, high plasticity, firm, organics/rootlets        | Pasture                                                                |
| SS06       | 35           | CLAY, with silt, trace sand, brown, moist to wet, high plasticity, firm, organics/rootlets      | Sample collected near former garage building                           |
| SS07       |              | CLAY, with gravel, with sand, with silt, light brown to brown, damp, low plasticity, no odours  | Stockpiles of soil                                                     |
| SS08       | 39           | SAND, with gravel, trace silt, light brown to brown, damp, compact, poorly graded               | Parking area and drive way, sample collected near AST for fuel storage |
| SS09       |              | CLAY, trace silt, trace gravel, dark brown, moist, high plasticity, firm, hydrocarbon odours    | Surface staining and historical spills                                 |
| SS10       |              | CLAY, trace silt, trace gravel, dark brown, moist, high plasticity, firm, hydrocarbon odours    | Rubbish storage and surface staining                                   |

| Sample No.   | Property No. | Lithology                                                                                                 | Observations                                                              |
|--------------|--------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| SS11 to SS18 | 40           | CLAY, with silt, trace sand, trace gravel, dark brown, moist, medium plasticity, stiff, organics/rootlets | Pasture                                                                   |
| SS19         | 36           | CLAY, with silt, trace gravel, dark brown, moist, medium plasticity, stiff, organics/rootlets             | Sample collected near rubbish and drum storage                            |
| SS20         |              | Gravelly SAND, with clay, with silt, trace gravel, grey to black, compact, well graded, hydrocarbon odour | Parking area and drive way, surface staining and automobile parts storage |
| SS21         |              | CLAY, trace silt, trace gravel, dark brown, moist, medium plasticity, stiff, organics/rootlets            | Pasture                                                                   |
| SS22 to SS26 | 38           | CLAY, with silt, trace sand, trace gravel, dark brown, moist, medium plasticity, stiff, organics/rootlets | Pasture                                                                   |

### 6.1.3 Soil quality results

GHD collected 26 shallow surface soil samples from properties 34 to 40 and analysed for parameters as outlined in Section 6.1.1. In general, analytes were reported below the applicable guidelines with the following exceptions outlined in Table 8 below.

**Table 8 Analytes exceeding applicable guidelines**

| Property No. | Sample ID | Analyte                                                               | Reported Concentration (mg/kg) | Guideline value exceeded |
|--------------|-----------|-----------------------------------------------------------------------|--------------------------------|--------------------------|
| 34           | SS01      | Copper                                                                | 73                             | 60 <sup>1</sup>          |
|              |           | Zinc                                                                  | 171                            | 70 <sup>1</sup>          |
|              | SS02      | Nickel                                                                | 85                             | 30 <sup>1</sup>          |
|              |           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> )                  | 5,500                          | 2,500 <sup>4</sup>       |
| 36           | SS20      | Nickel                                                                | 85                             | 30 <sup>1</sup>          |
|              |           | Zinc                                                                  | 143                            | 70 <sup>1</sup>          |
|              |           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> )                  | 5,020                          | 2,500 <sup>4</sup>       |
| 37           | SS04      | Zinc                                                                  | 135                            | 70 <sup>1</sup>          |
| 39           | SS08      | Nickel                                                                | 72                             | 30 <sup>1</sup>          |
|              |           | TRH fraction F2 (>C <sub>10</sub> -C <sub>16</sub> minus Naphthalene) | 130                            | 110 <sup>3</sup>         |
|              |           | TRH fraction F2 (>C <sub>10</sub> -C <sub>16</sub> )                  | 130                            | 120 <sup>2</sup>         |
|              |           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> )                  | 480                            | 300 <sup>2</sup>         |
|              | SS09      | Nickel                                                                | 34                             | 30 <sup>1</sup>          |
|              |           | Zinc                                                                  | 524                            | 70 <sup>1</sup>          |
|              |           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> )                  | 8,920                          | 2,500 <sup>4</sup>       |
|              | SS10      | Copper                                                                | 169                            | 60 <sup>1</sup>          |
|              |           | Nickel                                                                | 53                             | 30 <sup>1</sup>          |
|              |           | Zinc                                                                  | 418                            | 70 <sup>1</sup>          |

| Property No. | Sample ID | Analyte                                                               | Reported Concentration (mg/kg) | Guideline value exceeded |
|--------------|-----------|-----------------------------------------------------------------------|--------------------------------|--------------------------|
|              |           | TRH fraction F2 (>C <sub>10</sub> -C <sub>16</sub> minus Naphthalene) | 3,350                          | 110 <sup>3</sup>         |
|              |           | TRH fraction F2 (>C <sub>10</sub> -C <sub>16</sub> )                  | 3,350                          | 1,000 <sup>4</sup>       |
|              |           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> )                  | 29,000                         | 2,500 <sup>4</sup>       |
|              |           | TRH fraction F4 (>C <sub>34</sub> -C <sub>40</sub> )                  | 5,390                          | 2,800 <sup>2</sup>       |

**Notes:**

Guidelines referenced:

<sup>1</sup> – NEPM 1999 (as amended 2013) Conservative EIL-Urban Residential-Public Open Space

<sup>2</sup> – NEPM 1999 (as amended 2013) Ecological Screening Levels

<sup>3</sup> – NEPM 1999 (as amended 2013) Health Screening Levels: Residential (HSL A / B)

<sup>4</sup> – NEPM 1999 (as amended 2013) Management Limits for Petroleum Hydrocarbons

Tabulated analytical results are provided in Appendix B, Table 1. The laboratory analytical report can be found in Appendix F.

Based on the analytical results from the surface soil samples collected as part of this preliminary investigation, impacted surface soils were detected at property numbers 34, 36, 37 and 39.

## 6.2 Preliminary soil investigation discussion

Discussions for each property regarding the potential areas of environmental concern are provided below. The areas of concern are summarised in Table 9 below and presented in Appendix A, Figure 3. Detailed site plans showing the areas of concern are presented in Appendix A, Figures 5 through 9.

### 6.2.1 Property 34

Spills and releases of used oil from vehicle maintenance activities were observed on the surface of property 34. Spills and releases observed at the property, and those that may have occurred in the past, have the potential to impact the soil and groundwater quality at the site. The presence of scrap metal, vehicles and other rubbish stored on the surface of the site have the potential to leach contaminants into the surface of the soil. In addition, the evidence of burning of wastes on the property and storage of chemical waste on the site indicates poor waste management procedures. Additional assessment will be required to determine the soil and groundwater quality at property 34. Areas of concern are shown on Figure 5.

The surface soil sample, SS02, collected from an area of surface staining to the south of the shop building contained marginally elevated concentrations of copper, zinc and nickel and elevated concentrations of total recoverable hydrocarbons. This soil sample result confirms that surface impacts are present at the site.

### 6.2.2 Property 35

A garage building was previously located on the southern portion of the property. The building was removed and only the concrete pad remains at the site. There is potential that asbestos-containing materials may have been present in the building and deposited onto the site during demolition. The property owner was not aware of asbestos contamination at the property. No testing results were provided by the property owner to confirm that asbestos-containing materials were not present in the materials of the building.

Stockpiles of soil were observed on the southern portion of the site and a dam was reportedly filled in with imported clay fill soil on the southwestern portion of the property. No information

was provided indicating the quality of the fill soil brought onto the property. Imported fill soils would need to be tested to confirm contaminant concentrations.

The southern portion of property 35 is an area of concern because of the potential of asbestos contamination and the imported fill soil brought onto the site.

### **6.2.3 Property 36**

Surface staining was observed on the surface of property 36 at an area where automotive parts and containers of used oil were observed. The presence of surface staining indicates that spills and releases may have occurred at the property resulting in impacts to the soil and groundwater quality at the site. The presence of scrap metal, vehicles and other rubbish stored on the surface of the site have the potential to leach contaminants into the surface of the soil.

The surface soil sample, SS20, collected from an area of surface staining to the east of the shop building contained marginally elevated concentrations of nickel and zinc and elevated concentrations of total recoverable hydrocarbons. This soil sample result confirms that surface impacts are present at the site.

The western portion of property 36 is an area of concern due to the presence of surface staining and rubbish stored on the site.

### **6.2.4 Property 37**

A drain pipe was observed on the northwestern portion of the property which appeared to drain fluids from the west adjacent property 34 to the surface of property 37. Based on the observed spills and releases of used oil on property 34, there is a potential that impacted fluids have drained from the west property onto the surface of the site.

The surface soil sample, SS04, collected near the discharge point of the drain pipe contained marginally elevated concentrations of zinc and detected concentrations of hydrocarbons. This soil sample result confirms that soil impacts may be present at the property.

The northwestern portion of property 37 is an area of concern due to the presence of the drain pipe and the potential for impacted fluids draining from the adjacent property and impacting soil and groundwater quality at the site.

### **6.2.5 Property 38**

Based on the site inspection and discussions with the property owner, the site was currently and historically used as agricultural land. The property was identified as having a 'high' PFC in the GHD 2016 report because, based on review of historical aerial photographs, dams may have been infilled and a structure was removed from the property between 1991 and 2010, and the book "Pioneers on the Powlett and at Wonthaggi" reviewed as part of the desktop assessment indicates that an abattoir may have been present on this property. It was also stated that the potential for machinery related contaminants, chemical/fuel storage, fertilizers and pesticides/herbicides may have led to impacted soil and groundwater at the site. In addition, potential for accumulation and/or concentration of contaminants (associated with agricultural land use) may be present in drainage channels.

The property owner was not aware that the property was ever used as an abattoir and indicated that the site was only used as pasture for cattle and growing of snowpeas. No chemical or fuel storage was observed at the property.

Based on the analytical parameters tested for in this assessment, no elevated concentrations of metals and no detected concentrations of total recoverable hydrocarbons or pesticides above the limits of reporting were identified in the surface soil samples collected from the property.

Based on the site inspection, interview with the property owner, and surface soil sampling analytical results, it is determined that areas of concern still exist near the former dams, former building observed in the historical aerial photographs and the drainage channels potential containing agricultural related contaminants.

#### **6.2.6 Property 39**

Spills and releases of used oil were observed on the surface of property 39. Spills and releases observed at the property, and those that have occurred in the past, have the potential to impact the soil and groundwater quality at the site. The presence of scrap metal, vehicles and other rubbish stored on the surface of the site have the potential to leach contaminants into the surface of the soil. Evidence of chemical waste stored on various locations of the property indicates poor waste management procedures. Additional assessment will be required to determine the soil and groundwater quality at property 39.

The site representative reported that an abattoir was operated at the property in the past. As per the DSE 2005 Potentially Contaminated Land, General Practice Note, an abattoir is a land use activity that presents a high potential for contamination. Additionally, potential asbestos-containing material was observed at the site. A hazardous materials assessment will need to be conducted prior to the demolition and removal of the buildings.

The three surface soil samples, SS08, SS09 and SS10, collected from areas of surface staining contained elevated concentrations of metals and total recoverable hydrocarbons. These soil sample results confirm that surface impacts are present in the surface soils near the diesel fuel AST, adjacent to the south of the milking shed where surface staining was observed and near the storage area for vehicle parts and chemical containers on the southeastern portion of the site.

#### **6.2.7 Property 40**

Based on the site inspection and discussions with the property owner, the site was currently and historically used as agricultural land. The property was identified as having a 'high' PFC in the GHD 2016 report because a structure was removed from the property between 1991 and 2010, and the book "Pioneers on the Powlett and at Wonthaggi" reviewed as part of the desktop assessment indicates that an abattoir may have been present on this property. It was also stated that the potential for machinery related contaminants, chemical/fuel storage, nutrients and pesticides may have led to impacted soil and groundwater at the site. In addition, potential for accumulation and/or concentration of contaminants (associated with agricultural land use) may be present in drainage channels.

The property owner stated that the west adjacent property was used by an abattoir and that property 40 was only used as pasture for cattle and growing of snowpeas. No chemical or fuel storage was observed at the property.

Based on the analytical parameters tested for in this assessment, no elevated concentrations of metals and hydrocarbons and no detected concentrations of pesticides above the limits of reporting were identified in the surface soil samples collected from the property.

Based on the site inspection, interview with the property owner, and surface soil sampling analytical results, it is determined that areas of concern still exist near the former building observed in the historical aerial photographs and in the drainage channels.



### 6.2.8 Property 60-65

The presence of scrap metal, vehicles and other rubbish stored on the surface of the site have the potential to leach contaminants into the surface of the soil. Additional assessment will be required to determine the soil and groundwater quality at property 60-65.

The site representative reported that the historical use of the property included a depot for fuel supplies. As per the DSE 2005 Potentially Contaminated Land, General Practice Note, a fuel storage depot is a land use activity that presents a high potential for contamination.

Table 9 below summarises the areas of concern identified based on the site inspections, preliminary surface soil sampling and desktop information reviews.

**Table 9 Summary of areas of concern**

| Property No. | Areas of concern                                                                                                                                                                                                                                                                                                                              |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 34           | <ul style="list-style-type: none"><li>• Spills and releases from poor chemical storage and waste management practices in and around the storage workshop and other storage areas</li><li>• Contaminants leaking from scrap vehicles and other rubbish stored on the site in and around the storage workshop and other storage areas</li></ul> |
| 35           | <ul style="list-style-type: none"><li>• Former garage building on the southern portion of the site</li><li>• Former dam infilled</li><li>• Former cellar infilled</li><li>• Fill soil stockpiled on-site (5 small stockpiles)</li></ul>                                                                                                       |
| 36           | <ul style="list-style-type: none"><li>• Spills from poor chemical storage and waste management practices near storage building</li><li>• Contaminants leaking from scrap vehicles and other rubbish stored on the southeastern site</li></ul>                                                                                                 |
| 37           | <ul style="list-style-type: none"><li>• Drainage pipe located on the northwestern portion of the site originating from the west adjacent property</li></ul>                                                                                                                                                                                   |
| 38           | <ul style="list-style-type: none"><li>• Former building on the northern portion of the site</li><li>• Two former dams infilled</li><li>• Drainage channels accumulating agricultural contaminants</li></ul>                                                                                                                                   |
| 39           | <ul style="list-style-type: none"><li>• Former abattoir activities</li><li>• Spills and releases from farming activities</li><li>• Spills from poor chemical storage and waste management practices</li><li>• On-site buildings with ACM</li><li>• Contaminants leaking from scrap vehicles and other rubbish stored on the site</li></ul>    |
| 40           | <ul style="list-style-type: none"><li>• Former building on the northeastern portion of the site</li><li>• Drainage channels accumulating agricultural contaminants</li></ul>                                                                                                                                                                  |
| 60-65        | <ul style="list-style-type: none"><li>• Contaminants leaking from scrap vehicles and other rubbish stored on the site</li><li>• Historical fuel storage depot activities</li><li>• Historical UST</li></ul>                                                                                                                                   |

## 7. Targeted intrusive investigation

Based on the site inspections and preliminary soil investigation, a targeted intrusive investigation was completed to further assess the areas of concern detailed in Section 6.2 and summarised in Table 9 above.

- GHD notes that, based on discussions with Council, the areas of concern at property 34 and property 39 were not assessed during the targeted intrusive investigation because the potential impacts observed were extensive and will need to be assessed with comprehensive Detailed Site Investigations (DSIs) and Council did not want to proceed with DSIs at this time.
- The areas of concern at properties 35 and 37 were not assessed during the targeted intrusive investigation because the property owner did not provide access for the intrusive investigation works.
- As per discussions with Council, properties 60 to 67 were not assessed as part of the targeted intrusive investigation because these properties will remain as industrial land use at this time.

As such, the areas of concern identified at properties 36, 38 and 40 were assessed during the targeted intrusive investigation works. The targeted intrusive investigation locations are presented in Appendix A, Figure 6, Figure 7 and Figure 9.

### 7.1 Methodology

An excavator and operator was contracted to excavate nine narrow trenches or test pits to allow for visual assessment of soils in-situ and sample collection. Soil samples were collected from the bucket of the excavator where the soil had been undisturbed.

Discrete soil samples were collected at test pit locations from approximately 0.1, 0.5 and 1.0 m depths, and every 1 m thereafter. A total of 27 soil samples were collected from test pit locations at the potential areas of concern. Of the 27 soil samples collected from the test pits, eleven soil samples were submitted for analysis of asbestos presence/absence, IWRG 621 analytical suite, and/or TRH (C<sub>6</sub>-C<sub>40</sub>), BTEXN, PAHs, phenols, OCP/OPPs, and PCBs. The IWRG 621 analytical suite included analysis for TRH, PAHs, phenols, OCPs, PCBs, volatile organic compounds (VOCs), vinyl chloride, metals [As, Cd, Cr, Cu, Ni, Pb, Hg, Ag, Sn, Mo, Se, Zn, Cr<sup>6+</sup>], cyanide, total fluoride, and pH.

At the drainage canal sampling locations, the excavator collected soil from the bottom of the canal to a maximum depth of 0.5 m bgs. Eight discrete soil samples were collected from the drainage canal. The eight soil samples collected from the drainage canal were submitted for analysis of asbestos presence/absence, IWRG 621 analytical suite, and/or TRH (C<sub>6</sub>-C<sub>40</sub>), BTEXN, PAHs, phenols, OCP/OPP, and PCBs.

The locations of underground services were avoided by requesting utility service plans from the Dial Before You Dig online service and engaging an appropriately qualified sub-surface clearance sub-contractor to clear investigation locations.

The soil sampling was conducted using GHD's QA/QC procedures as described in Section 6.1. The QA/QC assessment for the targeted investigation is provided in Appendix H.

The excavated material was backfilled into the test pits and nominally re-compacted using the excavator bucket followed by excavator track rolling.

### 7.1.1 Soil sample lithology and observations

Interpretation of the site specific geology is based upon the test pits completed as part of the targeted intrusive investigation. A gravel and sand fill layer was encountered at the surface of test pit TP01. Clay fill soil was observed on the surface at test pits TP04, TP05, TP08 and TP09. Vegetation and topsoil was observed on the surface at test pits TP02, TP03 and TP06 and TP07. A clay fill soil was generally encountered below the surface soil layer. A dense clay layer was generally encountered below the fill soil. The dense clay layer extended to a depth of at least 2.0 m bgs in test pit TP08, the maximum depth excavated during this targeted intrusive investigation. A summary of the test pit lithology and site observations are provided in Table 10 below.

**Table 10 Summary of soil lithology and test pit observations**

| Test Pit No. | Property No. | Lithology                                                                                   | Observations                                                                                                                               |
|--------------|--------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| TP01         | 36           | Gravelly sand surface layer (0.0-0.1 m bgs)<br>Fill (0.1-0.7 m bgs)<br>Clay (0.7-1.0 m bgs) | Drive way and parking area.<br>Hydrocarbon odour detected near surface.                                                                    |
| TP02         | 40           | Topsoil surface layer (0.0-0.1 m bgs)<br>Clay (0.1-1.1 m bgs)                               | Building materials observed in surface layers.                                                                                             |
| TP03         |              | Topsoil surface layer (0.0-0.1 m bgs)<br>Clay (0.1-1.0 m bgs)                               |                                                                                                                                            |
| TP04         | 38           | Fill (0.0-0.6 m bgs)<br>Clay (0.6-1.5 m bgs)                                                | Apparent location of former dam that have been filled. Building materials found with the fill soil.                                        |
| TP05         |              | Fill (0.0-0.4 m bgs)<br>Clay (0.4-1.0 m bgs)                                                |                                                                                                                                            |
| TP06         |              | Topsoil surface layer (0.0-0.1 m bgs)<br>Clay (0.1-1.0 m bgs)                               | Apparent location of former building.                                                                                                      |
| TP07         |              | Topsoil surface layer (0.0-0.1 m bgs)<br>Clay (0.1-1.0 m bgs)                               |                                                                                                                                            |
| TP08         |              | Fill (approximately 0.0-1.2 m bgs)<br>Clay (approximately 1.2-2.0 m bgs)                    | Apparent location of former dam that have been filled. Area mounded from fill soil addition. No foreign materials identified in fill soil. |
| TP09         |              | Fill (approximately 0.0-0.8 m bgs)<br>Clay (approximately 0.8-1.0 m bgs)                    |                                                                                                                                            |

Test pit logs showing the encountered stratigraphy and field observations are provided in Appendix G.

### 7.1.2 Soil quality results

GHD collected 11 soil samples from test pits at properties 36, 38 and 40 and analysed for parameters as outlined in Section 7.1. In general, analytes were reported below the applicable guidelines with the exceptions outlined in Table 11 below.

**Table 11 Analytes exceeding applicable guidelines**

| Sample ID                                                                                                                                                                                                            | Property No. | Analyte                                              | Reported Concentration (mg/kg) | Guideline value exceeded |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------|--------------------------------|--------------------------|
| TP01_0.5                                                                                                                                                                                                             | 36           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> ) | 1,980                          | 300 <sup>2</sup>         |
| TP05_0.1                                                                                                                                                                                                             | 38           | Nickel                                               | 47                             | 30 <sup>1</sup>          |
|                                                                                                                                                                                                                      |              | Zinc                                                 | 126                            | 70 <sup>1</sup>          |
| TP08_0.1                                                                                                                                                                                                             | 38           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> ) | 350                            | 300 <sup>2</sup>         |
| TP09_0.1                                                                                                                                                                                                             | 38           | TRH fraction F3 (>C <sub>16</sub> -C <sub>34</sub> ) | 410                            | 300 <sup>2</sup>         |
| <b>Notes:</b><br>Guidelines referenced:<br><sup>1</sup> – NEPM 1999 (as amended 2013) Conservative EIL-Urban Residential-Public Open Space<br><sup>2</sup> – NEPM 1999 (as amended 2013) Ecological Screening Levels |              |                                                      |                                |                          |

Tabulated analytical results are provided in Appendix B, Table 2. The laboratory analytical reports can be found in Appendix F.

It is noted that no asbestos was detected in the soil samples collected from the test pits or drainage canal. In addition, no concentrations of phenols, pesticides, VOCs, PAHs, BTEXN or PCBs were detected in the targeted intrusive investigation soil samples submitted for analysis.

The soil assessment detailed above is a preliminary assessment and limited in nature. This assessment does not constitute a detailed assessment in accordance with Australian Standard AS4482.1 2005.

## 7.2 Targeted Intrusive Investigation Discussion

Discussions of the results of the targeted intrusive investigation at properties 36, 38 and 40 are provided below.

### 7.2.1 Property 36

Based on the analytical results from the test pit soil samples collected as part of this preliminary investigation, hydrocarbon impacted soil was detected at property 36 in test pit TP01 at a depth of 0.5 m bgs. A soil sample was subsequently analysed from test pit TP01 at a depth of 1.0 m bgs. Hydrocarbon concentrations were not detected above the laboratory limits of reporting in the deeper soil sample. It is unknown the horizontal extent of the shallow soil impacts and if groundwater is impacted.

Additional assessment will be required at property 36 to determine the extent of impacted soil and if the groundwater quality is impacted due to site activities. The PFC rating for property 36 has been determined as medium because the depth of hydrocarbon impacts appears to be limited, however, additional assessment should be completed.

### 7.2.2 Property 38

Based on the analytical results from the test pit soil samples collected as part of this preliminary investigation, minor metals and hydrocarbon impacted soil was detected at property 38.

Marginally elevated metal concentrations (nickel and zinc) were detected in test pit TP05 at a depth of 0.1 m bgs. In addition, rubbish and building materials appeared to be within the fill soil near test pits TP04 and TP05 down to a depth of approximately 0.4 m bgs.

No asbestos containing materials were identified in the samples of building materials submitted for analysis from TP04 or TP05.

Marginally elevated hydrocarbon concentrations were detected in test pits TP08 and TP09 at a depth of 0.1 m bgs. The soil samples with elevated total recoverable hydrocarbons collected from property 38 were subsequently submitted for hydrocarbon analysis with a silica gel clean-up procedure. The silica gel clean-up procedure removes the hydrocarbon concentrations related to naturally occurring organic material and differentiates the hydrocarbon concentrations related to anthropogenic sources. Based on this subsequent analysis, hydrocarbon concentrations were not detected above the laboratory limits of reporting in soil samples from property 38. The hydrocarbon concentrations found in soil from property 38 are likely to be related to naturally occurring organic material.

No elevated concentrations were detected in the drainage canal soil samples collected from property 38 and submitted for analysis.

The PFC rating for property 38 has been determined as low because no further works are considered necessary for this property, unless evidence of potentially contaminating activities or sources of contamination are identified at a later date.

### **7.2.3 Property 40**

Based on the analytical results from the test pit and drainage canal soil samples collected as part of this preliminary investigation, no elevated concentrations were detected.

The PFC rating for property 40 has been determined as low because no further works are considered necessary for this property, unless evidence of potentially contaminating activities or sources of contamination are identified at a later date.

## 8. Conclusions

Based on the results of the site inspections, interviews with owners and occupiers of the properties, surface soil analytical results and targeted intrusive investigation works, 10 of the 13 properties were determined to remain as having a 'high' potential for contamination. A PFC rating of 'high' remains for property 34 to 37, 39 and 60 to 65 because the presence of contamination or the potential for contamination was identified at the property.

Targeted intrusive investigations were conducted at properties 38 and 40 to evaluate areas of concern identified during the site inspections. Debris was identified in the fill soil at a location of a former dam at property 38 and at a location of a former building at property 40. Based on the samples submitted for analysis, asbestos-containing materials were not present in the debris. According to the results of the targeted intrusive investigations conducted at the areas of concern at properties 38 and 40, the risk ratings are considered to be 'low'.

A targeted intrusive investigation was conducted at property 36 to evaluate an area of concern identified during the site inspection. Based on the targeted intrusive investigation, hydrocarbon contamination is present on the eastern portion of the property. The hydrocarbon impacts have been delineated vertically but not horizontally, and additional intrusive investigations are required to determine soil and groundwater quality at property 36. Based on the targeted intrusive investigation conducted at property 36, the risk ratings is considered to be 'medium'.

Table 12 below summarises the previous and revised PFC ratings for the properties assessed as part of this Phase 1 preliminary site investigation.

**Table 12 PFC ratings**

| Property No. | Previous PFC Rating (GHD 2016) | Revised PFC Rating |
|--------------|--------------------------------|--------------------|
| 34           | High                           | High               |
| 35           | High                           | High               |
| 36           | High                           | Medium             |
| 37           | High                           | High               |
| 38           | High                           | Low                |
| 39           | High                           | High               |
| 40           | High                           | Low                |
| 60-65*       | High                           | High               |

**Notes:**

\* As stated in the GHD 2016 report, the properties remaining as industrial land use can be downgraded to a medium PFC rating.

As the majority of the properties are proposed for sensitive uses (residential, school, community and open space use) the PFC ratings translate directly to the following assessment levels in accordance with the DSE 2005, Potentially Contaminated Land, General Practice Note:

- High PFC Rating = Assessment Level 'A' required
- Medium PFC Rating = Assessment Level 'B' required
- Low PFC Rating = Assessment Level 'C' required.

The assessment levels are summarised below:

- Assessment Level 'A' properties - An Environmental Audit Overlay (or equivalent planning mechanism) should be applied to the properties to make sure the requirements of an environmental audit are met prior to redevelopment to sensitive residential or associated land use. The need for an environmental audit may be either confirmed or the PFC rating reduced if additional assessment is conducted and findings warrant the modification.
- Assessment Level 'B' properties – a Phase 1 environmental site assessment (ESA) (including comprehensive site inspections with access to locked structures) should be completed on these properties, specifically in those areas identified in the Study as containing specific PAoC. It is noted that a targeted ESA of these properties to evaluate the identified PAoC could be required and may either increase or reduce the PFC ratings and consequently the requirement for additional intrusive investigations.

If a Phase 2 ESA was recommended following completion of the Phase 1 ESA, the level of investigation required could vary significantly between properties across the study area, depending on their size and identified potential contamination issues.

Assessment Level 'C' properties – no further works are recommended for these properties, unless evidence of potentially contaminating activities or sources of contamination are identified at a later date. However, the site owner still retains a general duty under Section 12(2)(b) and Section 60(1)(a)(iii) of the Planning and Environment Act 1987. The results of the preliminary site investigation for each property are summarized in Appendix B, Table 3. The property assessment ratings are depicted in Appendix A, Figure 4.

## **9. Recommendations**

Based on this preliminary site investigation additional site investigations will be required at properties 34, 35, 36, 37, 39 and 60 to 65 prior to development of the properties to a more sensitive use. These additional ESAs would allow for assessment of the areas of concern identified during the preliminary site investigation. It is noted that detailed ESAs to evaluate the identified areas of concern may either increase or reduce the PFC ratings and consequently the requirement for additional intrusive investigations or an EAO.

No further works are considered necessary for properties 38 and 40, unless evidence of potentially contaminating activities or sources of contamination are identified at a later date.



## 10. References

Standards Australia, 1997. Australian Standard, Guide to the sampling and investigation of potentially contaminated soil. AS 4482.1 - 2005.

Victorian Department of Sustainability and Environment (VIC DSE), *Potentially Contaminated Land - General Practice Note*, 2005

Australian Standard, 2005. Guide to the sampling and investigation of potentially contaminated soil, AS4482.1, 2005.

NEPC 1999 as amended 2013. National Environment Protection (Assessment of Site Contamination) Measure (NEPM). National Environment Protection Council.

Victorian Government, 1997. *State Environment Protection Policy (Groundwaters of Victoria)*. Victorian Government Gazette No. S160 17 December 1997.

Victorian Government, 2002. *State Environmental Protection Policy (Prevention and Management of Contamination of Land)*. Victorian Government Gazette No. S95 4 June 2002.

Australian Standard, 2005. Guide to the sampling and investigation of potentially contaminated soil, AS4482.1, 2005.

# Appendices

# **Appendix A – Figures**

**Figure 1 Site Location**

**Figure 2 Locations of Surface Soil Samples**

**Figure 3 Areas of Concern**

**Figure 4 Property Assessment Level Plan**

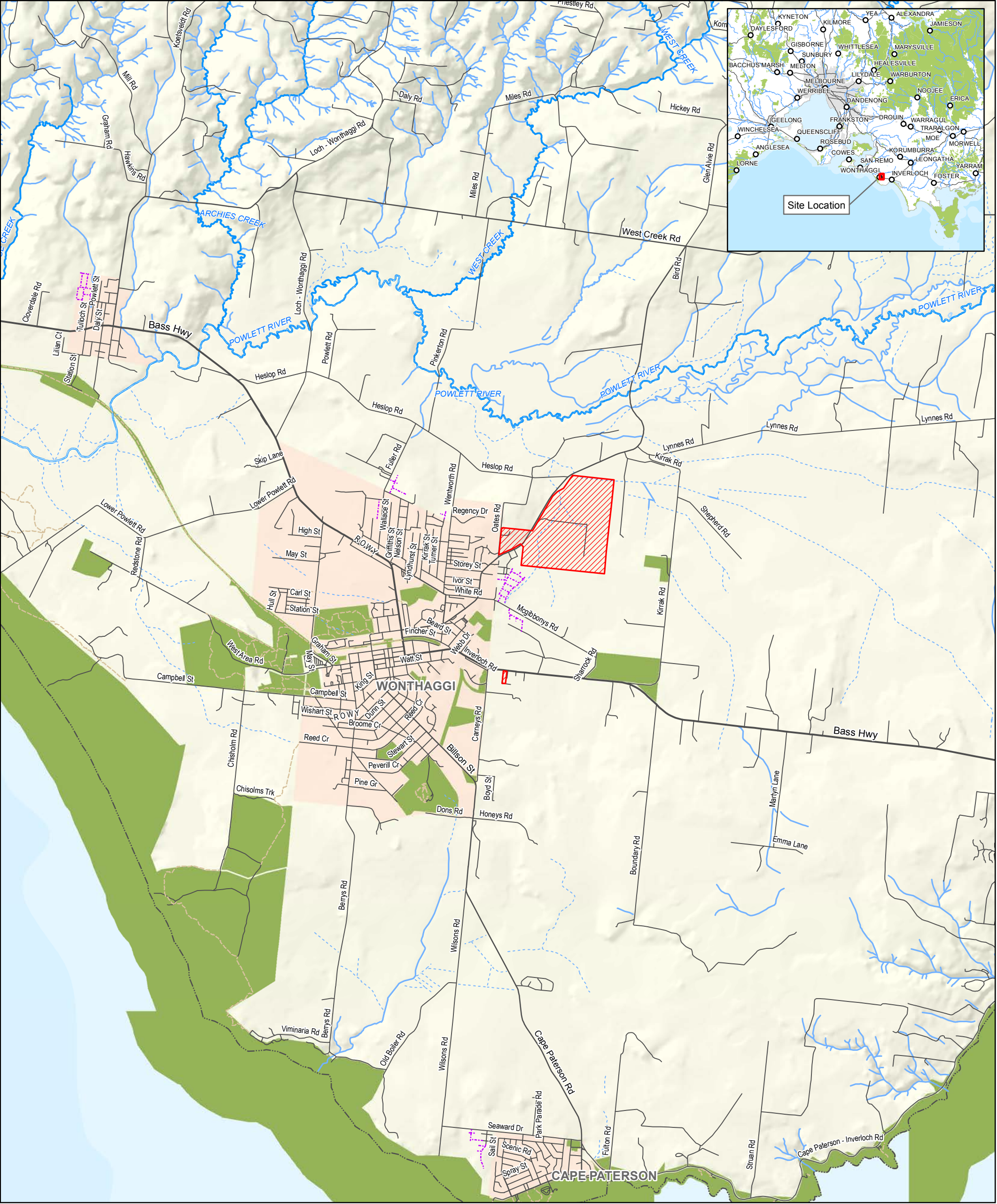
**Figure 5 Site Plan – Property 34, 35, 37**

**Figure 6 Site Plan – Property 36**

**Figure 7 Site Plan – Property 38**

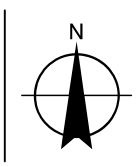
**Figure 8 Site Plan – Property 39**

**Figure 9 Site Plan – Property 40**



- LEGEND**
- |  |            |  |             |  |                     |
|--|------------|--|-------------|--|---------------------|
|  | Study area |  | Proposed    |  | Drain/Channel/Other |
|  | Parks      |  | Tracks      |  | Township area       |
|  | Highway    |  | Watercourse |  |                     |
|  | Arterial   |  | River       |  |                     |
|  | Collector  |  | Stream      |  |                     |

Scale 1:50,000 Paper Size A3  
0 250 500 1,000 1,500 2,000  
Metres  
Map Projection: Transverse Mercator  
Horizontal Datum: GDA 1994  
Grid: GDA 1994 MGA Zone 55



Bass Coast Shire Council  
Wonthaggi North East Growth Area

|            |             |
|------------|-------------|
| Job Number | 31-36558    |
| Revision   | A           |
| Date       | 01 Feb 2019 |

Site Location

Figure 1





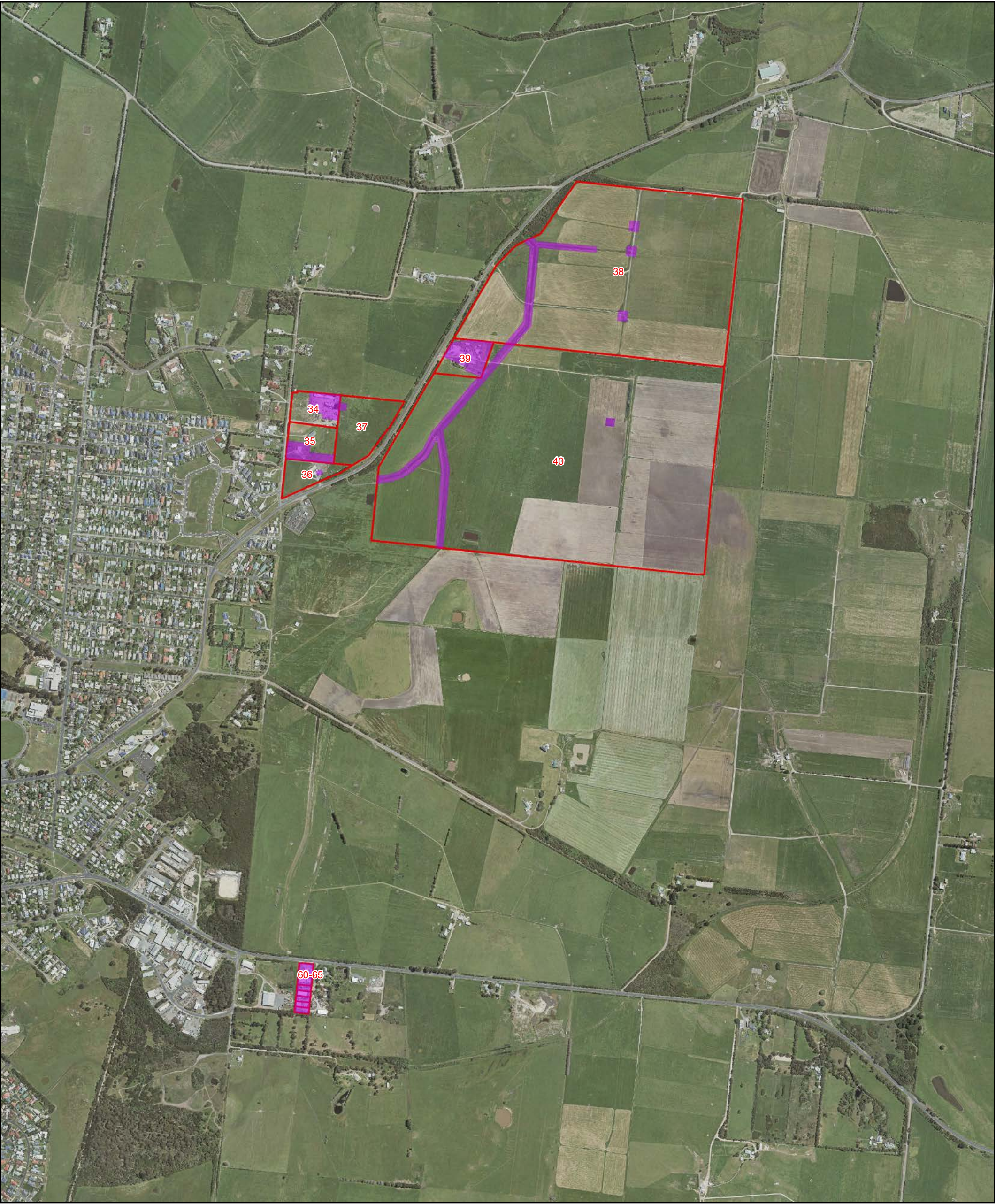
LEGEND

Property boundaries

● Surface soil sample locations

40 Property number





- LEGEND
- Property boundaries
  - Areas of concern
  - 40 Property number

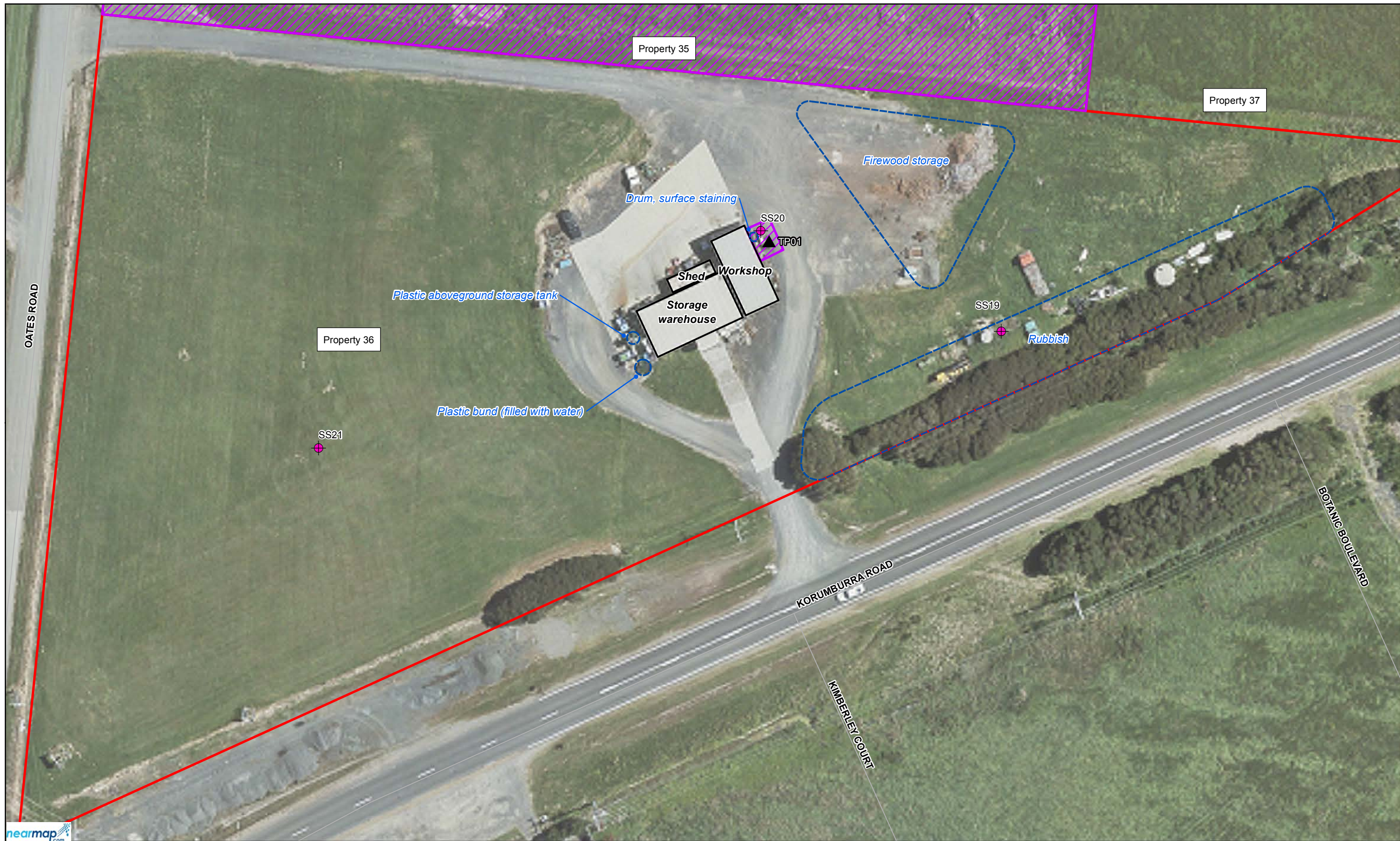




















Bass Coast Shire Council  
Wonthaggi North East Growth Area

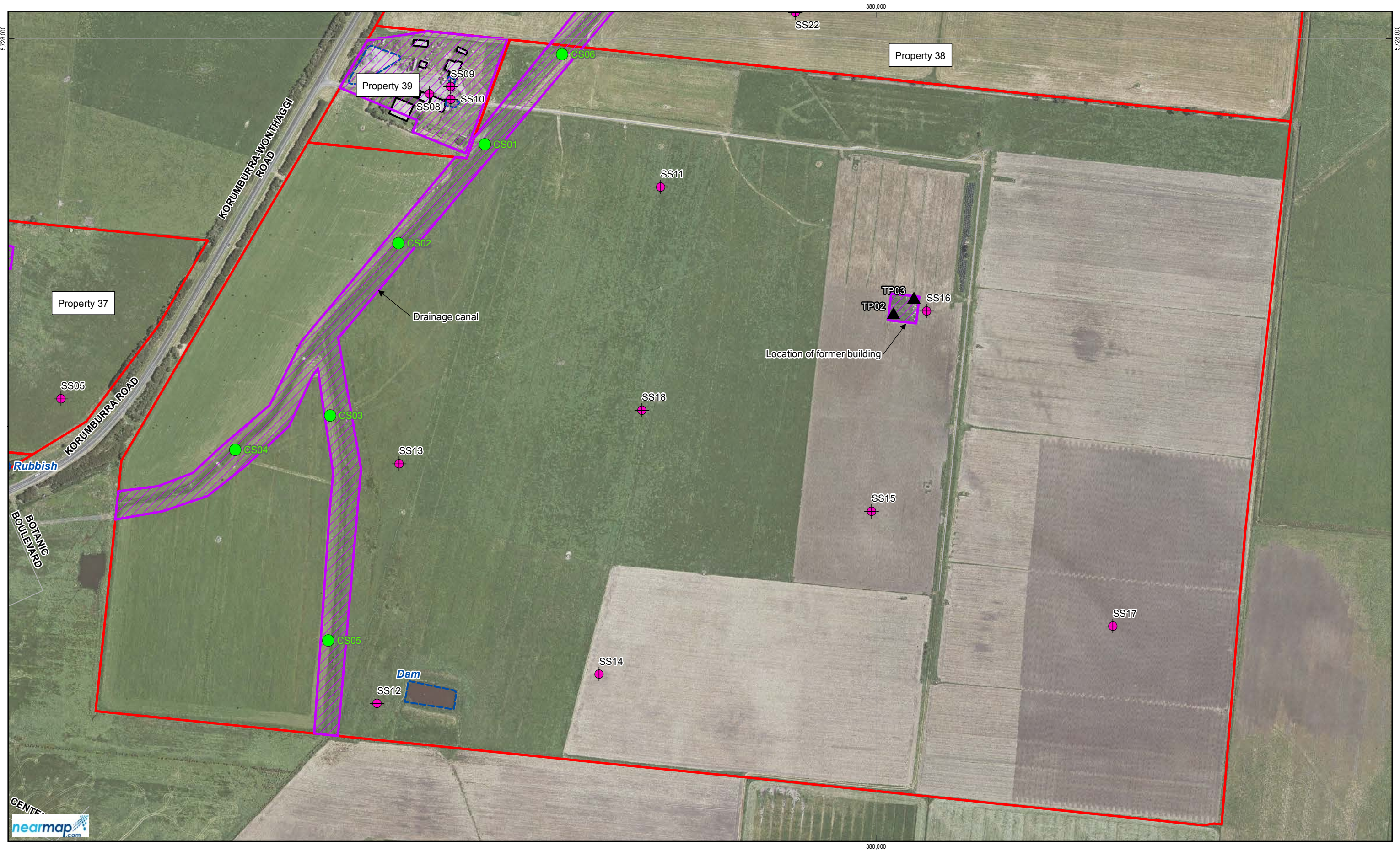
Job Number 31- 36558  
Revision 2  
Date 26 Feb 2019

Site Plan - Property 39

Figure 8

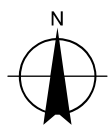
180 Lonsdale Street Melbourne VIC 3000 Australia T 61 3 8687 8000 F 61 3 8687 8111 E melmail@ghd.com W www.ghd.com





Paper Size A3  
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Metres

Map Projection: Transverse Mercator  
Horizontal Datum: GDA 1994  
Grid: GDA 1994 MGA Zone 55



#### Legend

Property Boundary  
 Areas of concern

⊕ Surface soil sample locations

Building

Field Observations

▲ Testpit Location

● Canal Sediment Sample Location



Bass Coast Shire Council  
Wonthaggi North East Growth Area

|            |             |
|------------|-------------|
| Job Number | 31- 36558   |
| Revision   | 2           |
| Date       | 26 Feb 2019 |

Site Plan - Property 40

Figure 9

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© 2019. Whilst every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: DWELP, VicMap, 2018; GHD, Field observations, building, potential areas of concern, stockpile, 2018; (c) Bass Coast Shire Council 2015. Created by:sacevedo

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# Appendix B – Tables

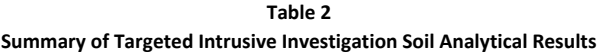
|         |                                                                     |
|---------|---------------------------------------------------------------------|
| Table 1 | Summary of Shallow Surface Soil Analytical Results                  |
| Table 2 | Summary of Targeted Intrusive Investigation Soil Analytical Results |
| Table 3 | Property Assessment Results                                         |





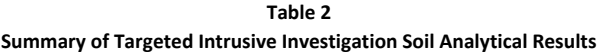
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# Wonthaggi North East Growth Area Phase 1 Preliminary Site Investigation

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# Wonthaggi North East Growth Area Phase 1 Preliminary Site Investigation

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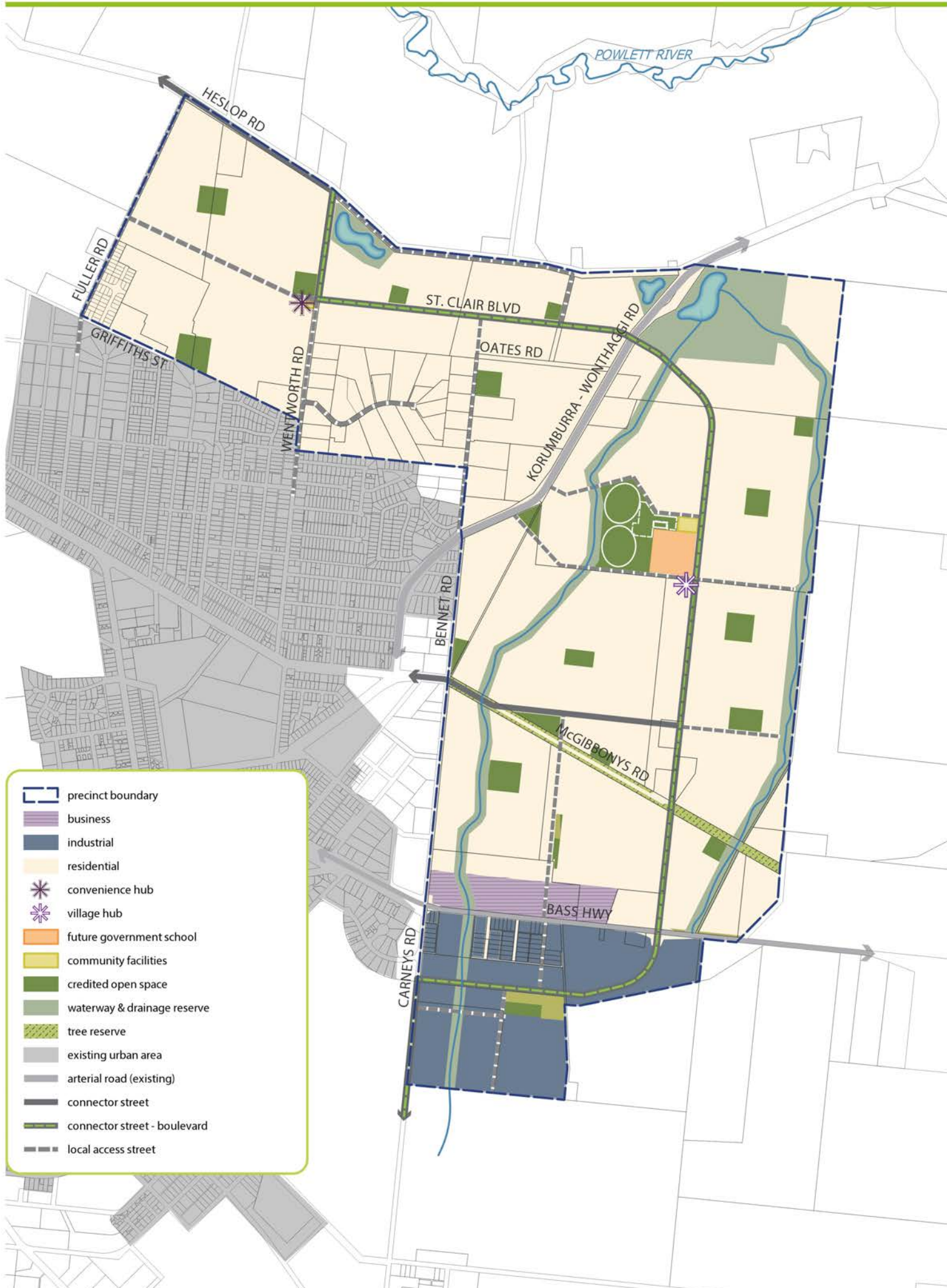


Table 3  
Summary of Properties and PFC Ratings

| Property No. | Activity Type                                                                      | Potential Sources of Contamination                                                                                                                  | Potential Contaminants of Concern                                                                                | Potential for Contamination Rating | Data Review | Site Inspections and Interview with Site Owner/Occupier | Preliminary Shallow Surface Soil Sampling | No. of soil samples | Targeted Intrusive Soil Sampling      | No. of soil samples |
|--------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------|---------------------------------------------------------|-------------------------------------------|---------------------|---------------------------------------|---------------------|
| 34           | Orchards                                                                           | Machinery related contaminants, fill material, chemical / fuel storage, process related contaminants, waste disposal practices                      | Broad chemical suite including metals, hydrocarbons, organic compounds, phenols, asbestos, pesticides, nutrients | High                               | Yes         | Yes                                                     | Yes                                       | 3                   | No                                    | -                   |
|              | Possible Abbatoir                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Butcher                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Building/Structure                                                                 |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Market garden/greenhouses/plant nursery/stockpiles/building demolition/ animal pen |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Storage/fill material/ stockpiles / ASTs                                           |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 35           | Farming                                                                            | Fill, contaminants from building demolition, waste disposal practices                                                                               | Broad chemical suite including metals, hydrocarbons, organic compounds, phenols, asbestos, pesticides, nutrients | High                               | Yes         | Yes                                                     | Yes                                       | 2                   | No                                    | -                   |
|              | Agriculture                                                                        |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 36           | Waste management practices                                                         | Machinery related contaminants, waste disposal practices                                                                                            | Broad chemical suite including metals, hydrocarbons, organic compounds, phenols, pesticides, nutrients           | Medium                             | Yes         | Yes                                                     | Yes                                       | 3                   | Yes                                   | 2                   |
|              | Storage                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Agricultural/commercial                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 37           | Drainage/waste disposal                                                            | Potential chemical disposal area                                                                                                                    | Broad chemical suite including metals, hydrocarbons, organic compounds, phenols, nutrients                       | High                               | Yes         | Yes                                                     | Yes                                       | 2                   | No                                    | -                   |
|              | Agriculture/farming                                                                |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 38           | Agricultural                                                                       | Fill, contaminants from building demolition, agricultural contaminants accumulating in drainage channel                                             | Broad chemical suite including metals, hydrocarbons, organic compounds, phenols, asbestos, pesticides, nutrients | Low                                | Yes         | Yes                                                     | Yes                                       | 5                   | Yes                                   | 11                  |
|              | Filling                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Cropping                                                                           |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Storage                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 39           | Possible Abattoir                                                                  | Machinery related contaminants, pesticides, former abattoir activities, fuel/ chemical storage, fill, spills and releases, waste disposal practices | Broad chemical suite including metals, hydrocarbons, organic compounds, phenols, asbestos, nutrients             | High                               | Yes         | Yes                                                     | Yes                                       | 3                   | No                                    | -                   |
|              | Milking cattle                                                                     |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Agricultural                                                                       |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Fill soil storage                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Waste management                                                                   |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 40           | Farming                                                                            | Fill, contaminants from building demolition, agricultural contaminants accumulating in drainage channel                                             | Broad chemical suite including metals, hydrocarbons, organic compounds, phenols, nutrients, asbestos, nutrients  | Low                                | Yes         | Yes                                                     | Yes                                       | 8                   | Yes                                   | 10                  |
|              | storage                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 60           | Buildings/Structure                                                                | Machinery related contaminants, chemical storage, bulk fuel storage process related contaminants, wash down area, triple interceptor traps          | Metals, PAH, TPH, various solvents, other various organic compounds, phenols                                     | High                               | Yes         | Yes                                                     | No (remaining as industrial land use)     | -                   | No (remaining as industrial land use) | -                   |
|              | Automotive body, paint and interior repair and maintenance                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Possible service station/depot (owned by Mobil Oil)                                |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Possible service station/depot (owned by BP Australia)                             |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Wholesale butcher                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Industrial use                                                                     |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Industrial                                                                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 61           | Industrial use                                                                     | Spray painting, machinery related contaminants, chemical / fuel storage, process related contaminants, wash down area, triple interceptor traps     | Metals, PAH, TPH, various solvents, other various organic compounds, phenols.                                    | High                               | Yes         | Yes                                                     | No (remaining as industrial land use)     | -                   | No (remaining as industrial land use) | -                   |
|              | Automotive body, paint and interior repair and maintenance                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Wholesale butcher                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Industrial                                                                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 62           | Industrial use                                                                     | Spray painting, machinery related contaminants, chemical / fuel storage, process related contaminants, wash down area, triple interceptor traps     | Metals, PAH, TPH, various solvents, other various organic compounds, phenols.                                    | High                               | Yes         | Yes                                                     | No (remaining as industrial land use)     | -                   | No (remaining as industrial land use) | -                   |
|              | Automotive body, paint and interior repair and maintenance                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Wholesale butcher                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Industrial                                                                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 63           | Industrial use                                                                     | Spray painting, machinery related contaminants, chemical / fuel storage, process related contaminants, wash down area, triple interceptor traps     | Metals, PAH, TPH, various solvents, other various organic compounds, phenols.                                    | High                               | Yes         | Yes                                                     | No (remaining as industrial land use)     | -                   | No (remaining as industrial land use) | -                   |
|              | Automotive body, paint and interior repair and maintenance                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Wholesale butcher                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Industrial                                                                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 64           | Industrial use                                                                     | Spray painting, machinery related contaminants, chemical / fuel storage, process related contaminants, wash down area, triple interceptor traps     | Metals, PAH, TPH, various solvents, other various organic compounds, phenols,                                    | High                               | Yes         | Yes                                                     | No (remaining as industrial land use)     | -                   | No (remaining as industrial land use) | -                   |
|              | Automotive body, paint and interior repair and maintenance                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Wholesale butcher                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Industrial                                                                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
| 65           | Industrial use                                                                     | Spray painting, machinery related contaminants, chemical / fuel storage, process related contaminants, wash down area, triple interceptor traps     | Metals, PAH, TPH, various solvents, other various organic compounds, phenols.                                    | High                               | Yes         | Yes                                                     | No (remaining as industrial land use)     | -                   | No (remaining as industrial land use) | -                   |
|              | Automotive body, paint and interior repair and maintenance                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Wholesale butcher                                                                  |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Farming                                                                            |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |
|              | Industrial                                                                         |                                                                                                                                                     |                                                                                                                  |                                    |             |                                                         |                                           |                     |                                       |                     |

## **Appendix C** – Precinct structure plan and property planning reports









127.0 0 63.50 127.0 Metres

GDA\_1994\_VICGRID94  
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Map Created on 05-Oct-2018  
Scale 1:2,500

# PLANNING PROPERTY REPORT

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 08:55 AM

## PROPERTY DETAILS

Address: **26 OATES ROAD NORTH WONTHAGGI 3995**  
Lot and Plan Number: **Lot 2 LP211687**  
Standard Parcel Identifier (SPI): **2\LP211687**  
Local Government Area (Council): **BASS COAST**  
Council Property Number: **8122004610.0000**  
Planning Scheme: **Bass Coast**  
Directory Reference: **VicRoads 713 U2**

[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

[planning-schemes.delwp.vic.gov.au/schemes/basscoast](http://planning-schemes.delwp.vic.gov.au/schemes/basscoast)

## UTILITIES

Rural Water Corporation: **Southern Rural Water**  
Urban Water Corporation: **South Gippsland Water**  
Melbourne Water: **outside drainage boundary**  
Power Distributor: **AUSNET**

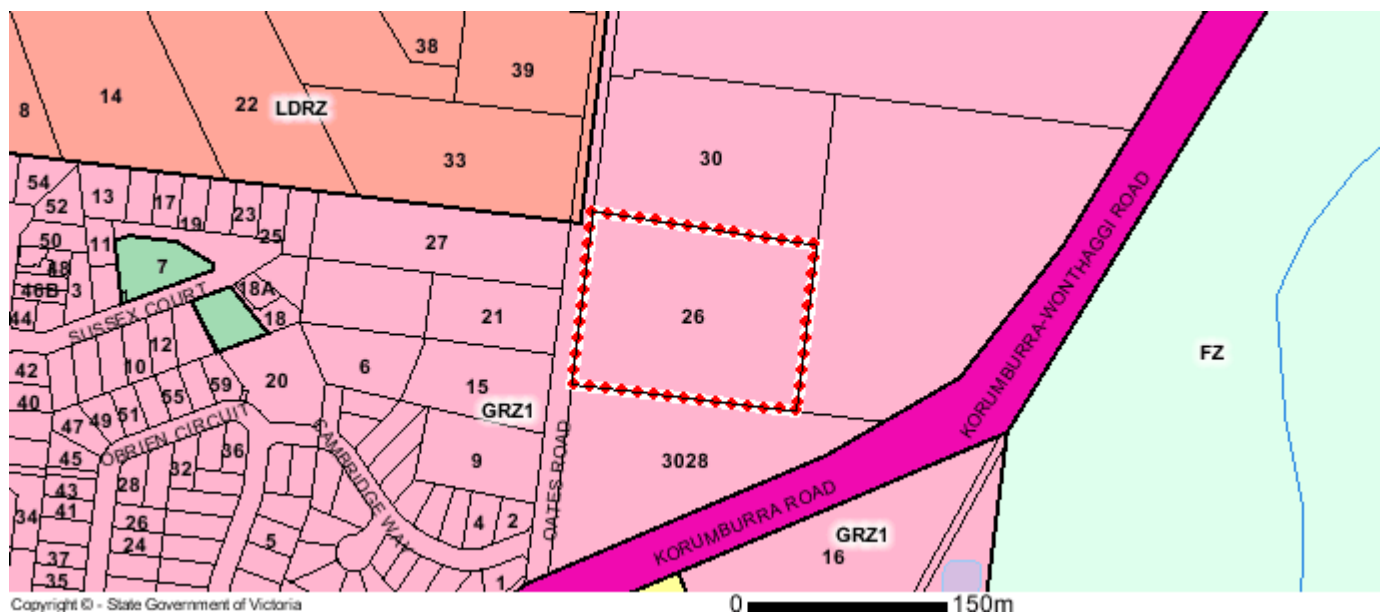
## STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**  
Legislative Assembly: **BASS**

## Planning Zones

[GENERAL RESIDENTIAL ZONE \(GRZ\)](#)

[GENERAL RESIDENTIAL ZONE - SCHEDULE 1 \(GRZ1\)](#)



|                                 |                                       |                                |
|---------------------------------|---------------------------------------|--------------------------------|
| FZ - Farming                    | GRZ - General Residential             | LDRZ - Low Density Residential |
| PPRZ - Public Park & Recreation | PUZ1 - Public Use - Service & Utility | RDZ1 - Road - Category 1       |

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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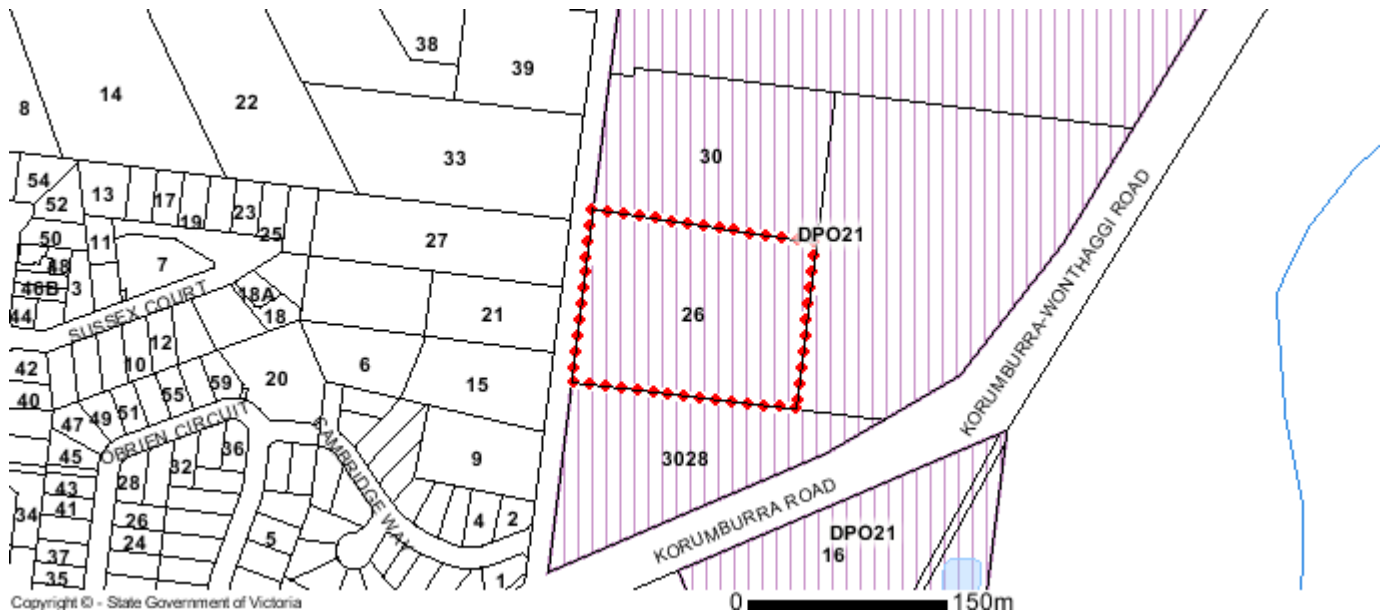
Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).



## Planning Overlay

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[DEVELOPMENT PLAN OVERLAY - SCHEDULE 21 \(DPO21\)](#)



 DPO - Development Plan

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 26 September 2018.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting <https://www.planning.vic.gov.au>

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987.

It does not include information about exhibited planning scheme amendments, or zonings that may affect the land.

To obtain a Planning Certificate go to Titles and Property Certificates at Landata - <https://www.landata.vic.gov.au>

For details of surrounding properties, use this service to get the Reports for properties of interest

To view planning zones, overlay and heritage information in an interactive format visit <http://mapshare.maps.vic.gov.au/vicplan>

For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

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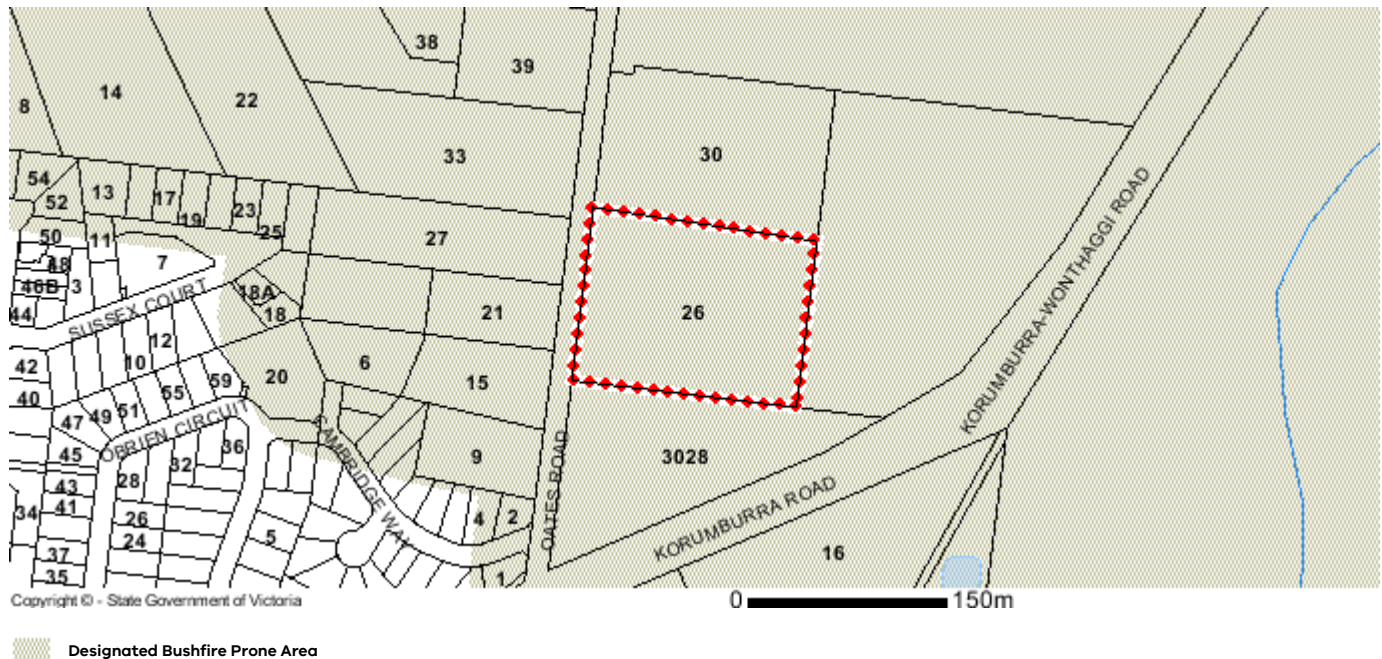
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PLANNING PROPERTY REPORT: 26 OATES ROAD NORTH WONTHAGGI 3995

Page 2 of 3

## Designated Bushfire Prone Area

**This property is in a designated bushfire prone area.  
Special bushfire construction requirements apply. Planning provisions may apply.**



Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011, as amended by gazette notices on 25 October 2012, 8 August 2013, 30 December 2013, 3 June 2014, 22 October 2014, 29 August 2015, 21 April 2016, 18 October 2016, 2 June 2017, 6 November 2017 and 16 May 2018.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at <http://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website [www.vba.vic.gov.au](http://www.vba.vic.gov.au)

Copies of the Building Act and Building Regulations are available from [www.legislation.vic.gov.au](http://www.legislation.vic.gov.au)

For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>



# PLANNING PROPERTY REPORT

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 08:56 AM

## PROPERTY DETAILS

Address: **30 OATES ROAD NORTH WONTHAGGI 3995**  
Lot and Plan Number: **Lot 1 LP211687**  
Standard Parcel Identifier (SPI): **1\LP211687**  
Local Government Area (Council): **BASS COAST**  
Council Property Number: **8162000100.0000**  
Planning Scheme: **Bass Coast**  
Directory Reference: **VicRoads 713 U2**

[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

[planning-schemes.delwp.vic.gov.au/schemes/basscoast](http://planning-schemes.delwp.vic.gov.au/schemes/basscoast)

## UTILITIES

Rural Water Corporation: **Southern Rural Water**  
Urban Water Corporation: **South Gippsland Water**  
Melbourne Water: **outside drainage boundary**  
Power Distributor: **AUSNET**

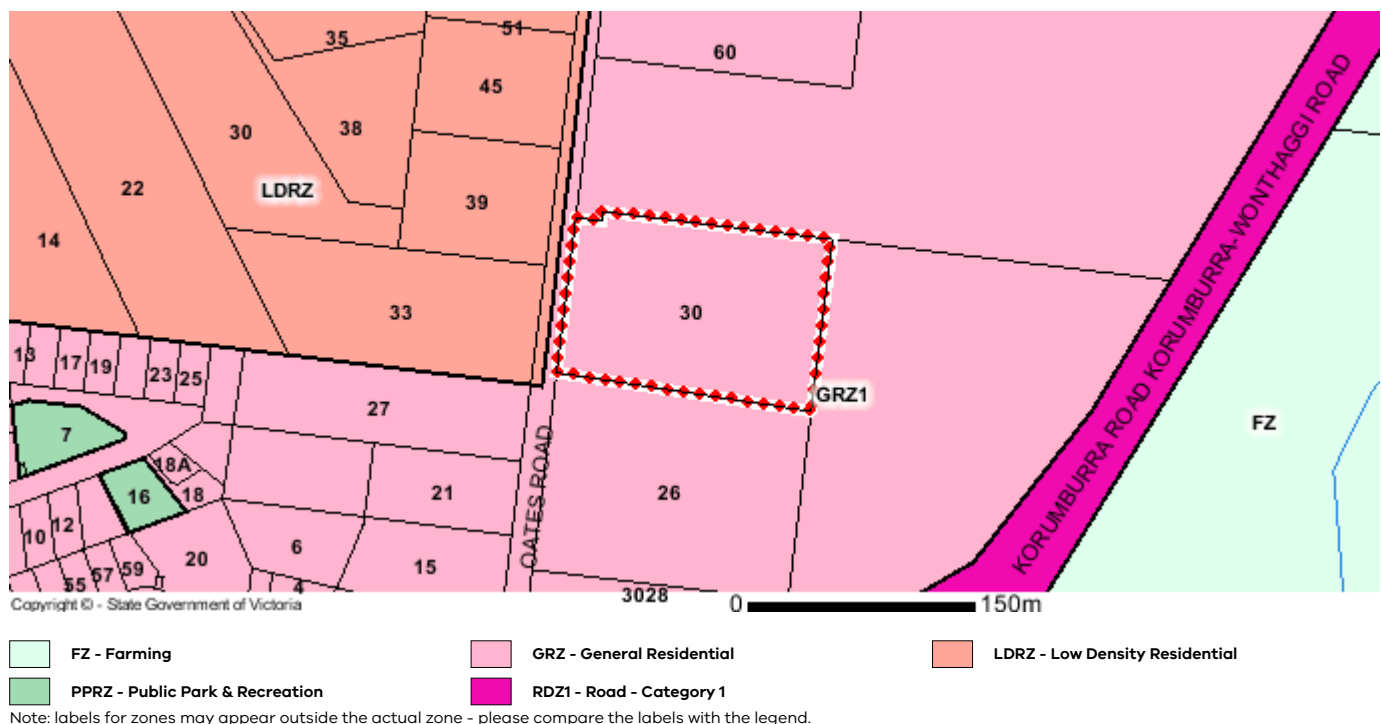
## STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**  
Legislative Assembly: **BASS**

## Planning Zones

[GENERAL RESIDENTIAL ZONE \(GRZ\)](#)

[GENERAL RESIDENTIAL ZONE - SCHEDULE 1 \(GRZ1\)](#)



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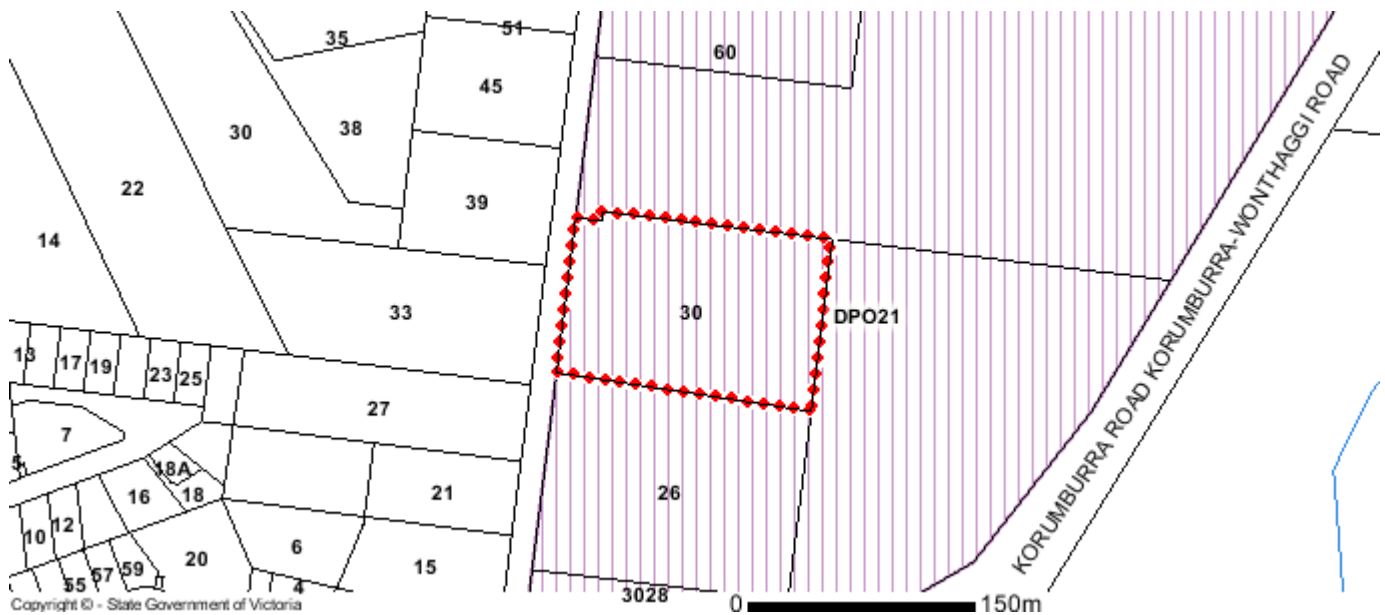
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Read the full disclaimer at [www.land.vic.gov.au/home/copyright-and-disclaimer](http://www.land.vic.gov.au/home/copyright-and-disclaimer)

Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).

## Planning Overlay

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[DEVELOPMENT PLAN OVERLAY - SCHEDULE 21 \(DPO21\)](#)



 DPO - Development Plan

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 26 September 2018.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting <https://www.planning.vic.gov.au>

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For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

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PLANNING PROPERTY REPORT: 30 OATES ROAD NORTH WONTHAGGI 3995

Page 2 of 3

## Designated Bushfire Prone Area

**This property is in a designated bushfire prone area.  
Special bushfire construction requirements apply. Planning provisions may apply.**



Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011, as amended by gazette notices on 25 October 2012, 8 August 2013, 30 December 2013, 3 June 2014, 22 October 2014, 29 August 2015, 21 April 2016, 18 October 2016, 2 June 2017, 6 November 2017 and 16 May 2018.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at <http://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website [www.vba.vic.gov.au](http://www.vba.vic.gov.au)

Copies of the Building Act and Building Regulations are available from [www.legislation.vic.gov.au](http://www.legislation.vic.gov.au)

For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>



# PLANNING PROPERTY REPORT

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 08:57 AM

## PROPERTY DETAILS

Address: **KORUMBURRA-WONTHAGGI ROAD NORTH WONTHAGGI 3995**  
Lot and Plan Number: **Lot 1 PS648351**  
Standard Parcel Identifier (SPI): **1\PS648351**  
Local Government Area (Council): **BASS COAST**  
Council Property Number: **8122004581.0000**  
Planning Scheme: **Bass Coast**  
Directory Reference: **VicRoads 102 C3**

[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

[planning-schemes.delwp.vic.gov.au/schemes/basscoast](http://planning-schemes.delwp.vic.gov.au/schemes/basscoast)

## UTILITIES

Rural Water Corporation: **Southern Rural Water**  
Urban Water Corporation: **South Gippsland Water**  
Melbourne Water: **outside drainage boundary**  
Power Distributor: **AUSNET**

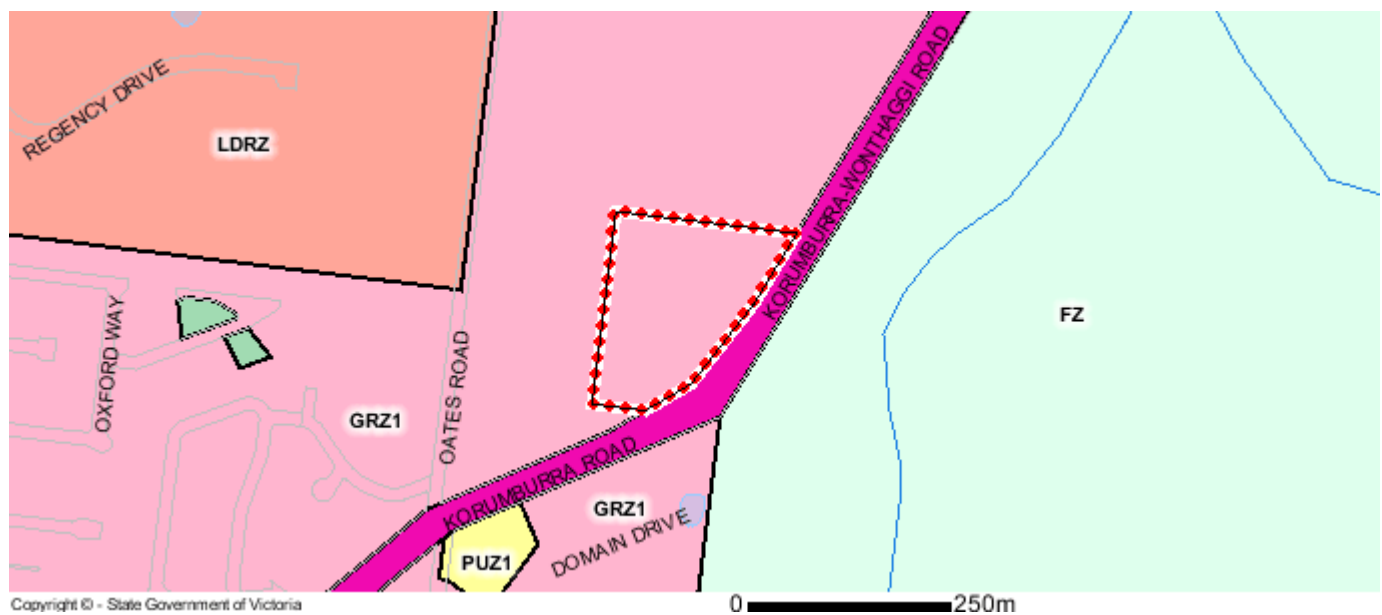
## STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**  
Legislative Assembly: **BASS**

## Planning Zones

[GENERAL RESIDENTIAL ZONE \(GRZ\)](#)

[GENERAL RESIDENTIAL ZONE - SCHEDULE 1 \(GRZ1\)](#)



|                                 |                                       |                                |
|---------------------------------|---------------------------------------|--------------------------------|
| FZ - Farming                    | GRZ - General Residential             | LDRZ - Low Density Residential |
| PPRZ - Public Park & Recreation | PUZ1 - Public Use - Service & Utility | RDZ1 - Road - Category 1       |

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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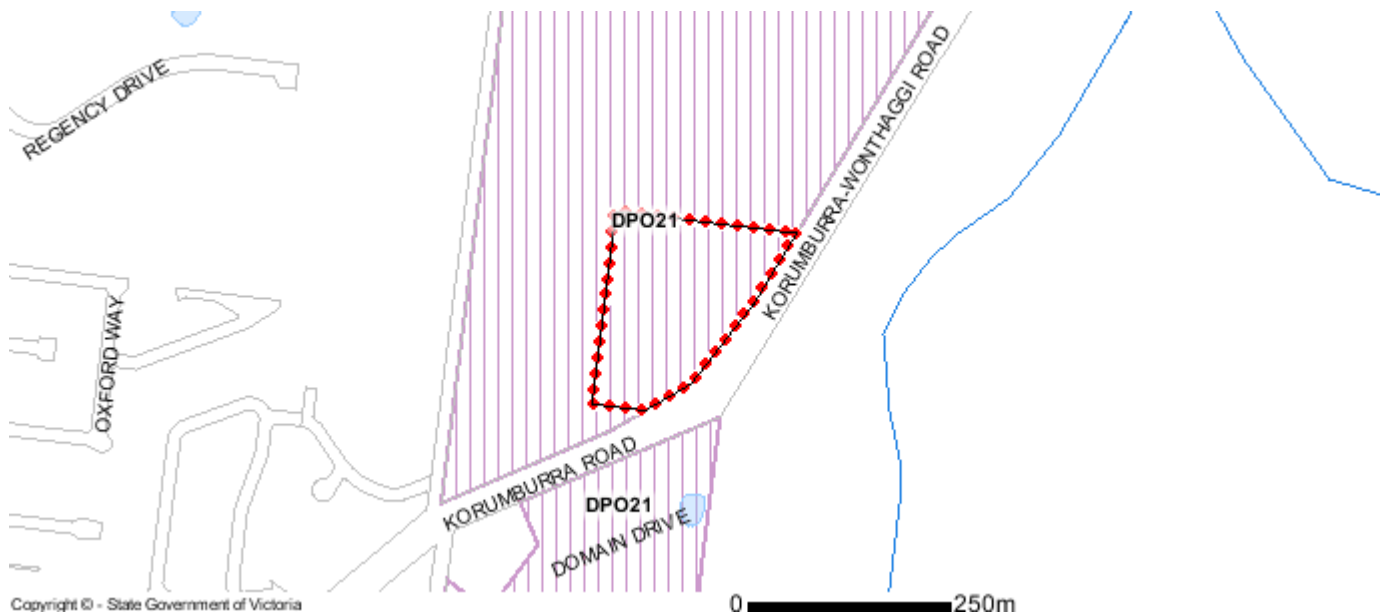
PLANNING PROPERTY REPORT: KORUMBURRA-WONTHAGGI ROAD NORTH WONTHAGGI 3995

Page 1 of 3

## Planning Overlay

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[DEVELOPMENT PLAN OVERLAY - SCHEDULE 21 \(DPO21\)](#)



 DPO - Development Plan

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

## Further Planning Information

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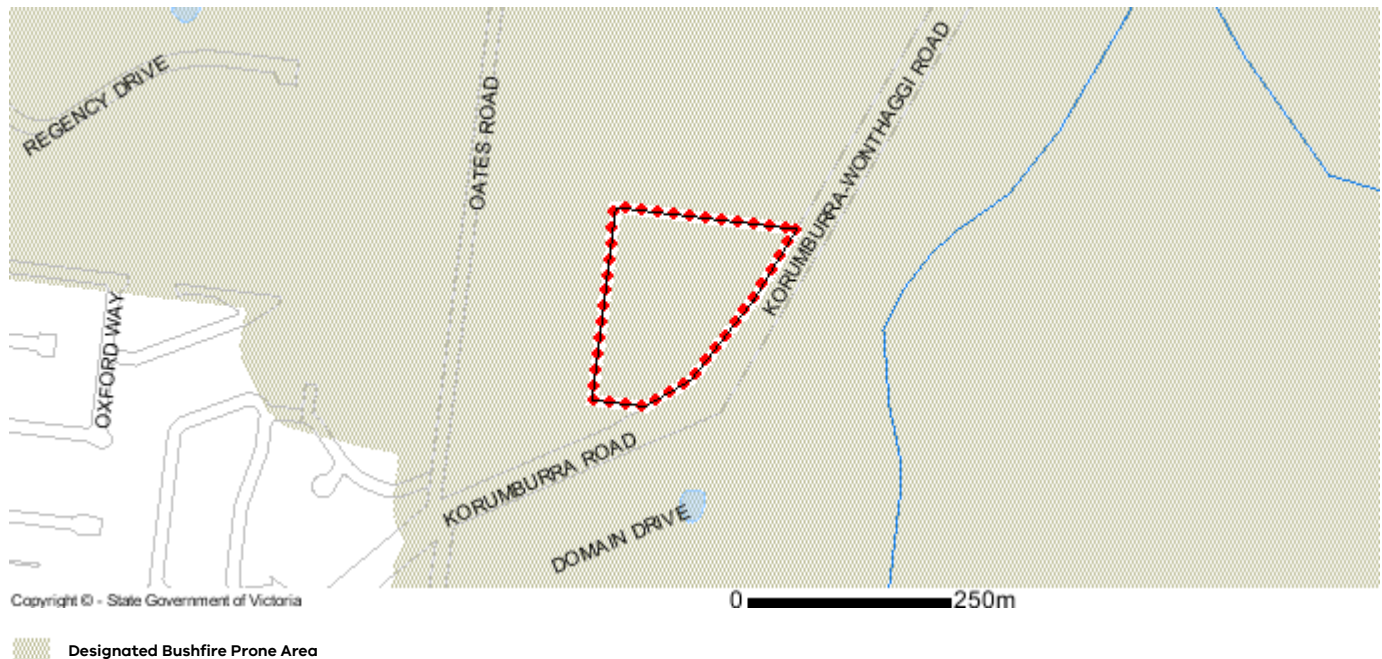
For details of surrounding properties, use this service to get the Reports for properties of interest

To view planning zones, overlay and heritage information in an interactive format visit <http://mapshare.maps.vic.gov.au/vicplan>

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## Designated Bushfire Prone Area

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Special bushfire construction requirements apply. Planning provisions may apply.**



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Designated bushfire prone areas maps can be viewed on VicPlan at <http://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

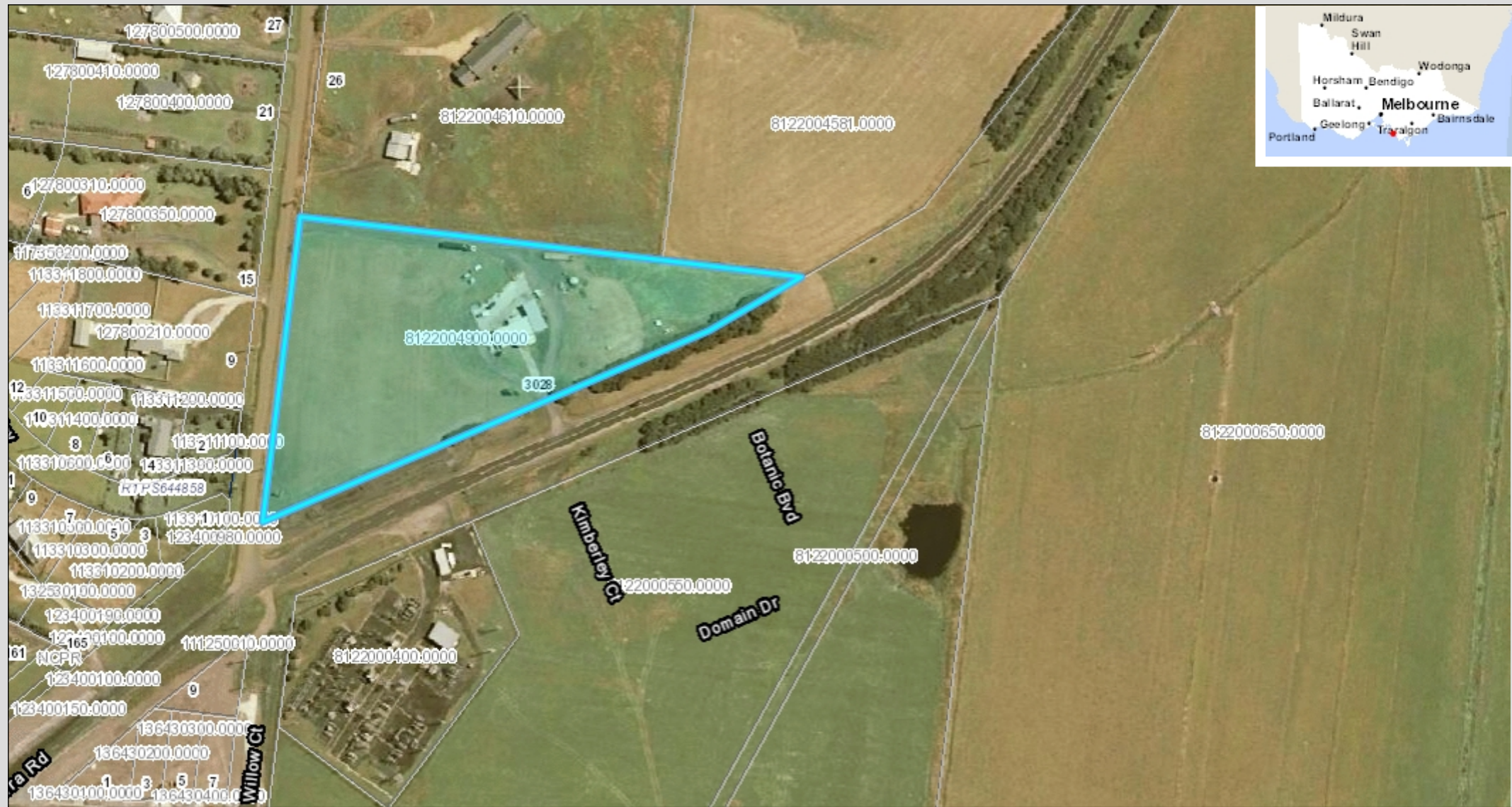
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For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>





127.0 0 63.50 127.0 Metres

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Map Created on 05-Oct-2018  
Scale 1:2,500

# PLANNING PROPERTY REPORT

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 08:48 AM

## PROPERTY DETAILS

Address: **3028 KORUMBURRA-WONTHAGGI ROAD NORTH WONTHAGGI 3995**  
Lot and Plan Number: **Lot 1 TP129892**  
Standard Parcel Identifier (SPI): **1\TP129892**  
Local Government Area (Council): **BASS COAST**  
Council Property Number: **8122004900.0000**  
Planning Scheme: **Bass Coast**  
Directory Reference: **VicRoads 713 U3**

[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

[planning-schemes.delwp.vic.gov.au/schemes/basscoast](http://planning-schemes.delwp.vic.gov.au/schemes/basscoast)

## UTILITIES

Rural Water Corporation: **Southern Rural Water**  
Urban Water Corporation: **South Gippsland Water**  
Melbourne Water: **outside drainage boundary**  
Power Distributor: **AUSNET**

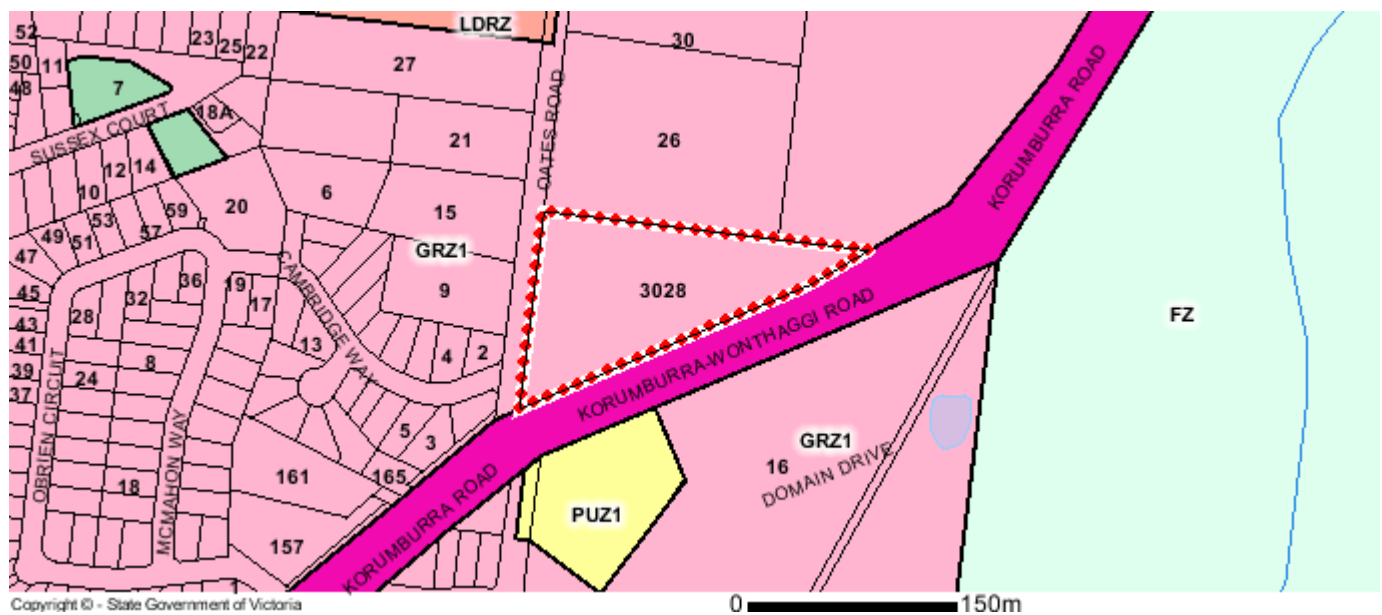
## STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**  
Legislative Assembly: **BASS**

## Planning Zones

[GENERAL RESIDENTIAL ZONE \(GRZ\)](#)

[GENERAL RESIDENTIAL ZONE - SCHEDULE 1 \(GRZ1\)](#)



|                                 |                                       |                                |
|---------------------------------|---------------------------------------|--------------------------------|
| FZ - Farming                    | GRZ - General Residential             | LDRZ - Low Density Residential |
| PPRZ - Public Park & Recreation | PUZ1 - Public Use - Service & Utility | RDZ1 - Road - Category 1       |

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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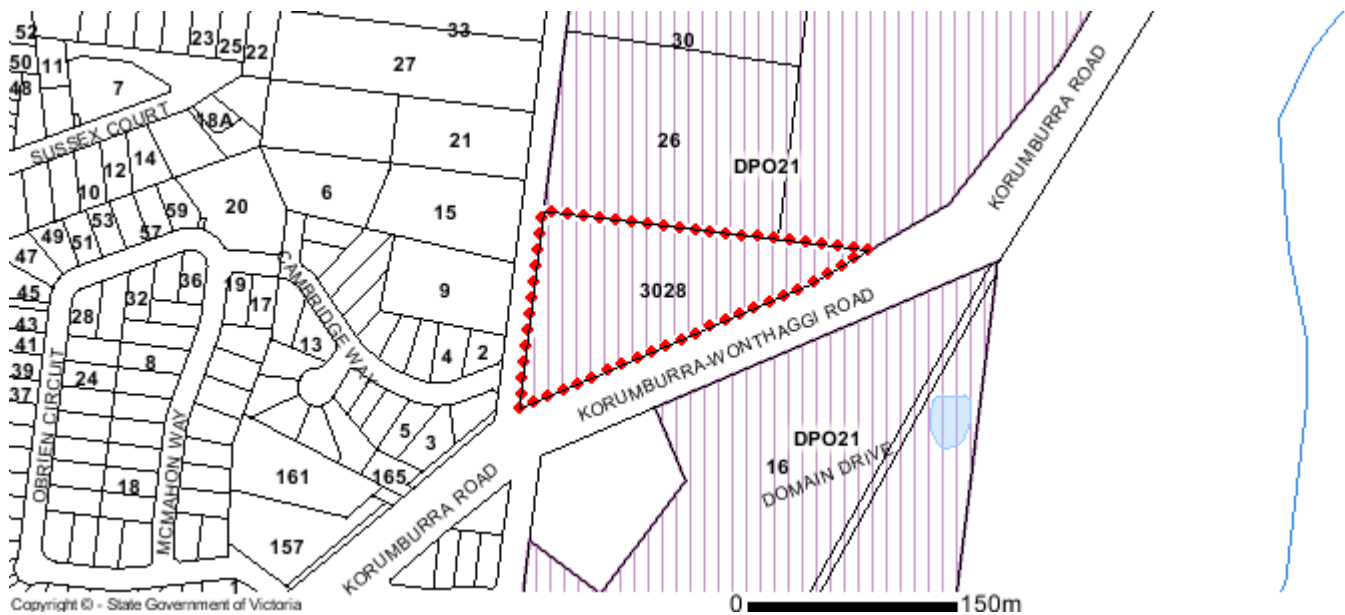
PLANNING PROPERTY REPORT: 3028 KORUMBURRA-WONTHAGGI ROAD NORTH WONTHAGGI 3995

Page 1 of 3

## Planning Overlay

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[DEVELOPMENT PLAN OVERLAY - SCHEDULE 21 \(DPO21\)](#)



 DPO - Development Plan

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 26 September 2018.

A **planning scheme** sets out policies and requirements for the use, development and protection of land. This report provides information about the zone and overlay provisions that apply to the selected land. Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting <https://www.planning.vic.gov.au>

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To view planning zones, overlay and heritage information in an interactive format visit <http://mapshare.maps.vic.gov.au/vicplan>

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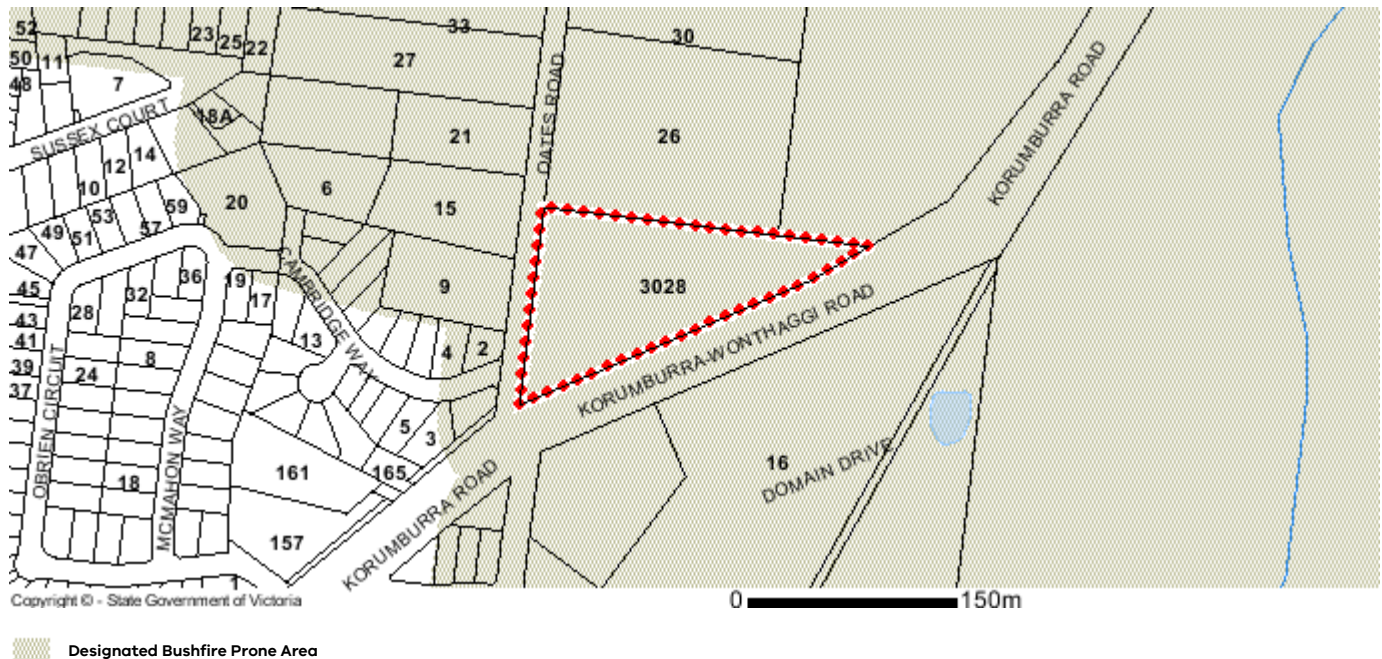
PLANNING PROPERTY REPORT: 3028 KORUMBURRA-WONTHAGGI ROAD NORTH WONTHAGGI 3995

Page 2 of 3



## Designated Bushfire Prone Area

**This property is in a designated bushfire prone area.  
Special bushfire construction requirements apply. Planning provisions may apply.**



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The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

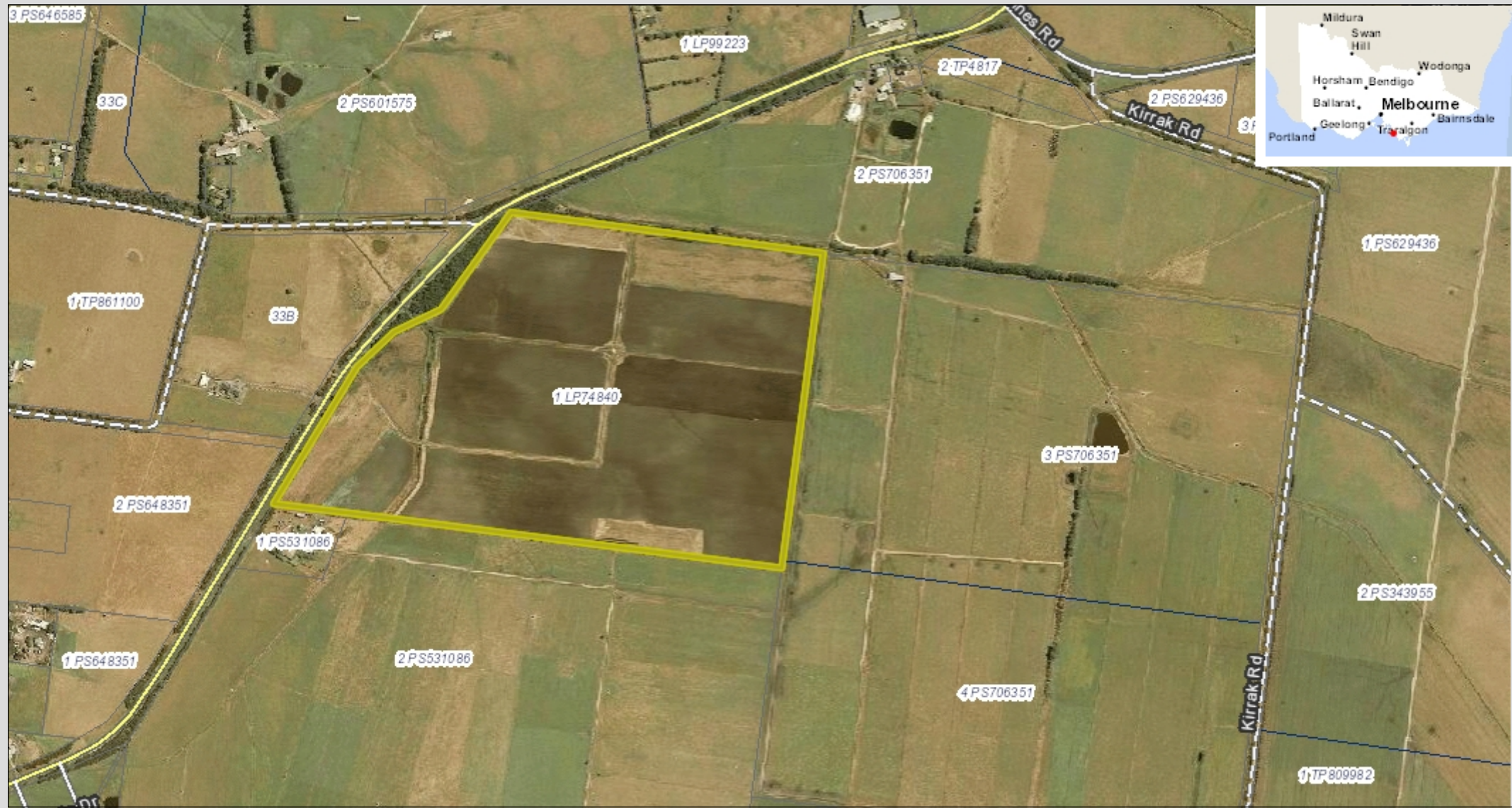
Designated bushfire prone areas maps can be viewed on VicPlan at <http://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website [www.vba.vic.gov.au](http://www.vba.vic.gov.au)

Copies of the Building Act and Building Regulations are available from [www.legislation.vic.gov.au](http://www.legislation.vic.gov.au)

For Planning Scheme Provisions in bushfire areas visit <https://www.planning.vic.gov.au>



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Map Created on 05-Oct-2018  
Scale 1:10,000

# PLANNING PROPERTY REPORT

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 09:12 AM

## PROPERTY DETAILS

Address: **KORUMBURRA-WONTHAGGI ROAD ST CLAIR 3995**  
Lot and Plan Number: **Lot 1 LP74840**  
Standard Parcel Identifier (SPI): **1\LP74840**  
Local Government Area (Council): **BASS COAST**  
Council Property Number: **8122000700.0000**  
Planning Scheme: **Bass Coast**  
Directory Reference: **VicRoads 102 C3**

[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

[planning-schemes.delwp.vic.gov.au/schemes/basscoast](http://planning-schemes.delwp.vic.gov.au/schemes/basscoast)

## UTILITIES

Rural Water Corporation: **Southern Rural Water**  
Urban Water Corporation: **South Gippsland Water**  
Melbourne Water: **outside drainage boundary**  
Power Distributor: **AUSNET**

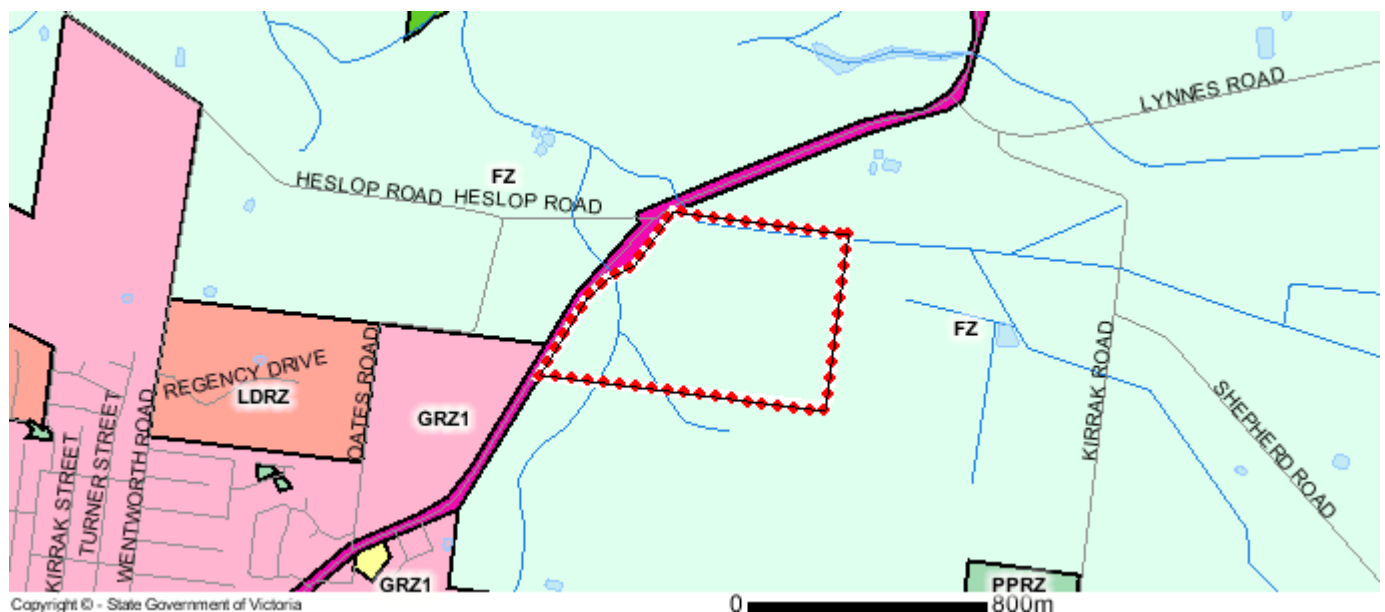
## STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**  
Legislative Assembly: **BASS**

## Planning Zones

### FARMING ZONE (FZ)

### SCHEDULE TO THE FARMING ZONE (FZ)



|                                       |                                 |                                       |
|---------------------------------------|---------------------------------|---------------------------------------|
| FZ - Farming                          | GRZ - General Residential       | LDRZ - Low Density Residential        |
| PCRZ - Public Conservation & Resource | PPRZ - Public Park & Recreation | PUZ1 - Public Use - Service & Utility |
| RDZ1 - Road - Category 1              |                                 |                                       |

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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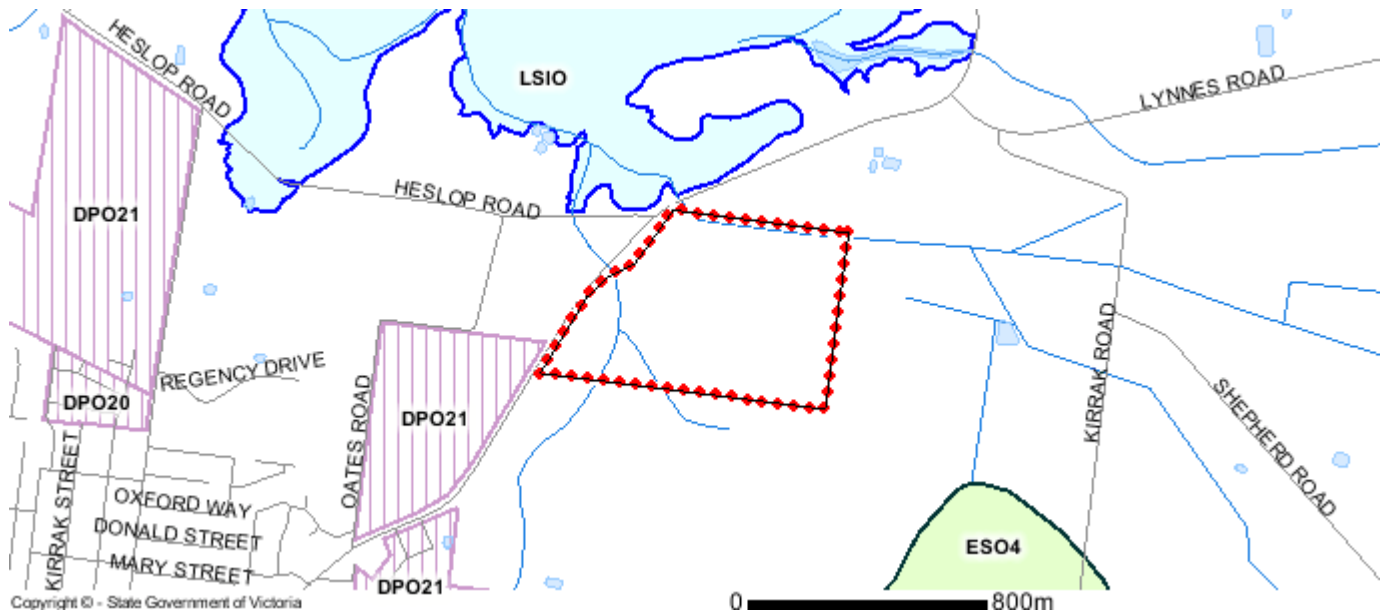
## Planning Overlay

None affecting this land - there are overlays in the vicinity

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[ENVIRONMENTAL SIGNIFICANCE OVERLAY \(ESO\)](#)

[LAND SUBJECT TO INUNDATION OVERLAY \(LSIO\)](#)



DPO - Development Plan
  ESO - Environmental Significance
  LSIO - Land Subject to Inundation

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 26 September 2018.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

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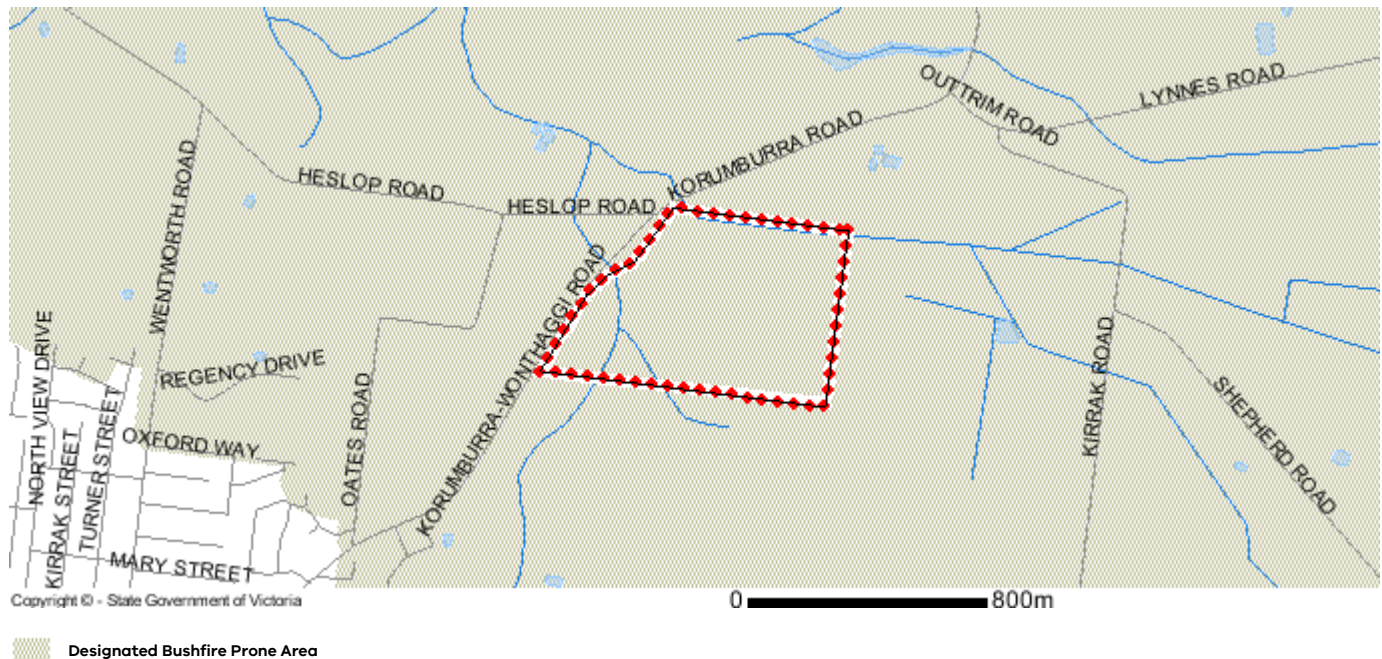
For details of surrounding properties, use this service to get the Reports for properties of interest

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For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

## Designated Bushfire Prone Area

This property is in a designated bushfire prone area.  
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Map Created on 05-Oct-2018  
Scale 1:2,500



# PLANNING PROPERTY REPORT

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 09:02 AM

## PROPERTY DETAILS

Address: **2965 KORUMBURRA-WONTHAGGI ROAD ST CLAIR 3995**  
Lot and Plan Number: **Lot 1 PS531086**  
Standard Parcel Identifier (SPI): **1\PS531086**  
Local Government Area (Council): **BASS COAST**  
Council Property Number: **8122000610.0000**  
Planning Scheme: **Bass Coast**  
Directory Reference: **VicRoads 102 C3**

[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

[planning-schemes.delwp.vic.gov.au/schemes/basscoast](http://planning-schemes.delwp.vic.gov.au/schemes/basscoast)

## UTILITIES

Rural Water Corporation: **Southern Rural Water**  
Urban Water Corporation: **South Gippsland Water**  
Melbourne Water: **outside drainage boundary**  
Power Distributor: **AUSNET**

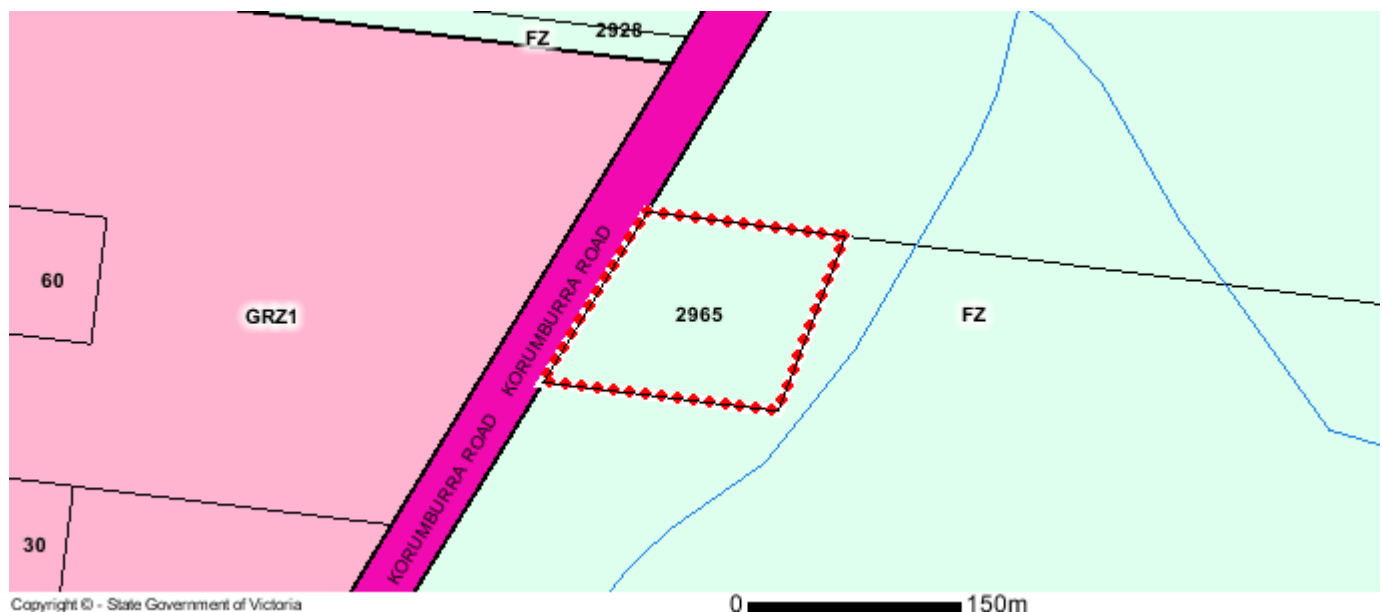
## STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**  
Legislative Assembly: **BASS**

## Planning Zones

[FARMING ZONE \(FZ\)](#)

[SCHEDULE TO THE FARMING ZONE \(FZ\)](#)



**FZ - Farming** **GRZ - General Residential** **RDZ1 - Road - Category 1**

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).

PLANNING PROPERTY REPORT: 2965 KORUMBURRA-WONTHAGGI ROAD ST CLAIR 3995

Page 1 of 3

## Planning Overlay

None affecting this land - there are overlays in the vicinity

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)



 DPO - Development Plan

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 26 September 2018.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

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To view planning zones, overlay and heritage information in an interactive format visit <http://mapshare.maps.vic.gov.au/vicplan>

For other information about planning in Victoria visit <https://www.planning.vic.gov.au>

## Designated Bushfire Prone Area

**This property is in a designated bushfire prone area.  
Special bushfire construction requirements apply. Planning provisions may apply.**



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The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at <http://mapshare.maps.vic.gov.au/vicplan> or at the relevant local council.

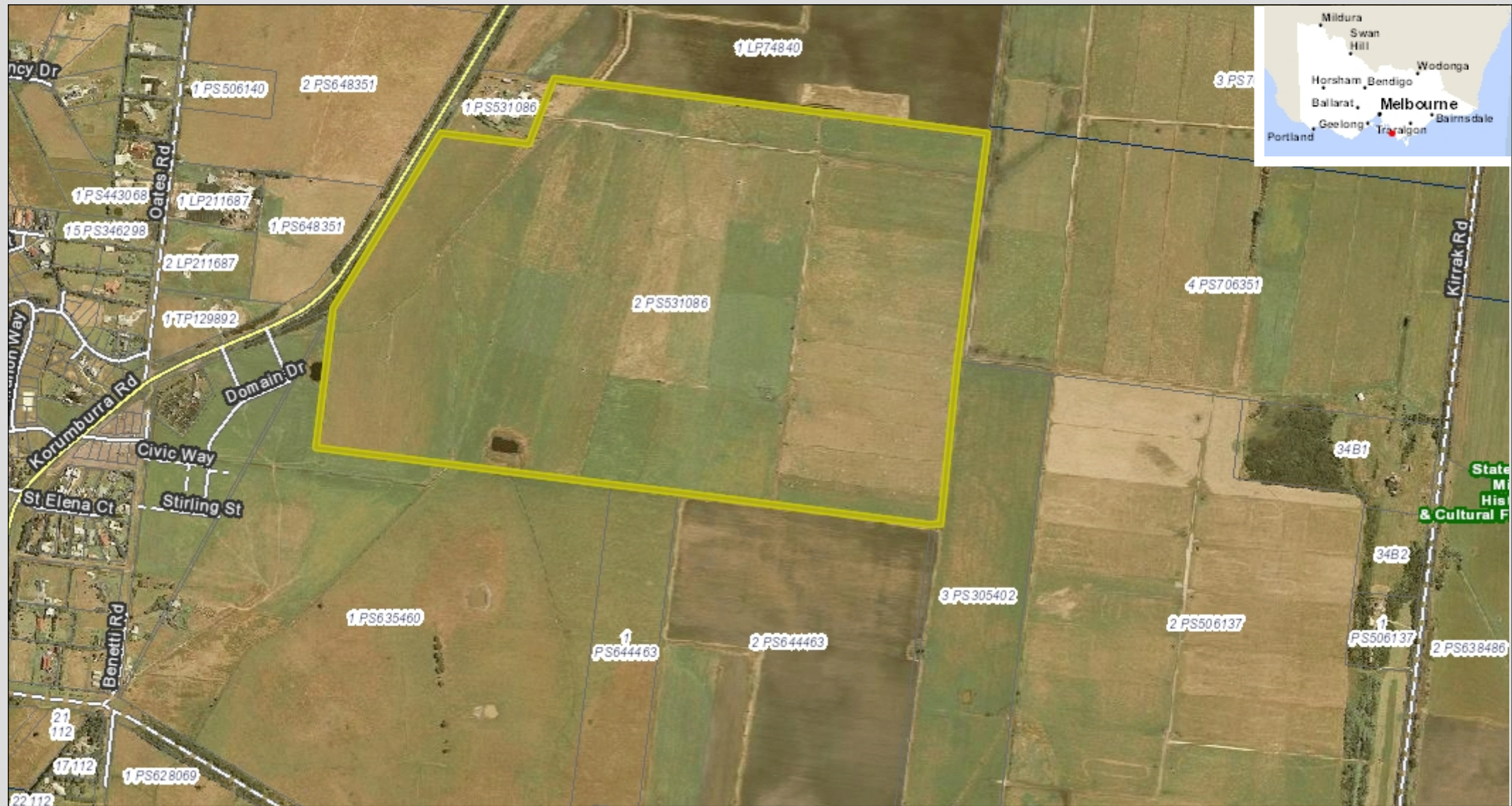
Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website [www.vba.vic.gov.au](http://www.vba.vic.gov.au)

Copies of the Building Act and Building Regulations are available from [www.legislation.vic.gov.au](http://www.legislation.vic.gov.au)

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Scale 1:10,000

# PLANNING PROPERTY REPORT

From [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 09:06 AM

## PROPERTY DETAILS

Lot and Plan Number: **Lot 2 PS531086**  
Address: **KORUMBURRA-WONTHAGGI ROAD ST CLAIR 3995**  
Standard Parcel Identifier (SPI): **2\PS531086**  
Local Government Area (Council): **BASS COAST**  
Council Property Number: **8122000650.0000**  
Planning Scheme: **Bass Coast**  
Directory Reference: **VicRoads 102 C3**

[www.basscoast.vic.gov.au](http://www.basscoast.vic.gov.au)

[planning-schemes.delwp.vic.gov.au/schemes/basscoast](http://planning-schemes.delwp.vic.gov.au/schemes/basscoast)

## UTILITIES

Rural Water Corporation: **Southern Rural Water**  
Urban Water Corporation: **South Gippsland Water**  
Melbourne Water: **outside drainage boundary**  
Power Distributor: **AUSNET**

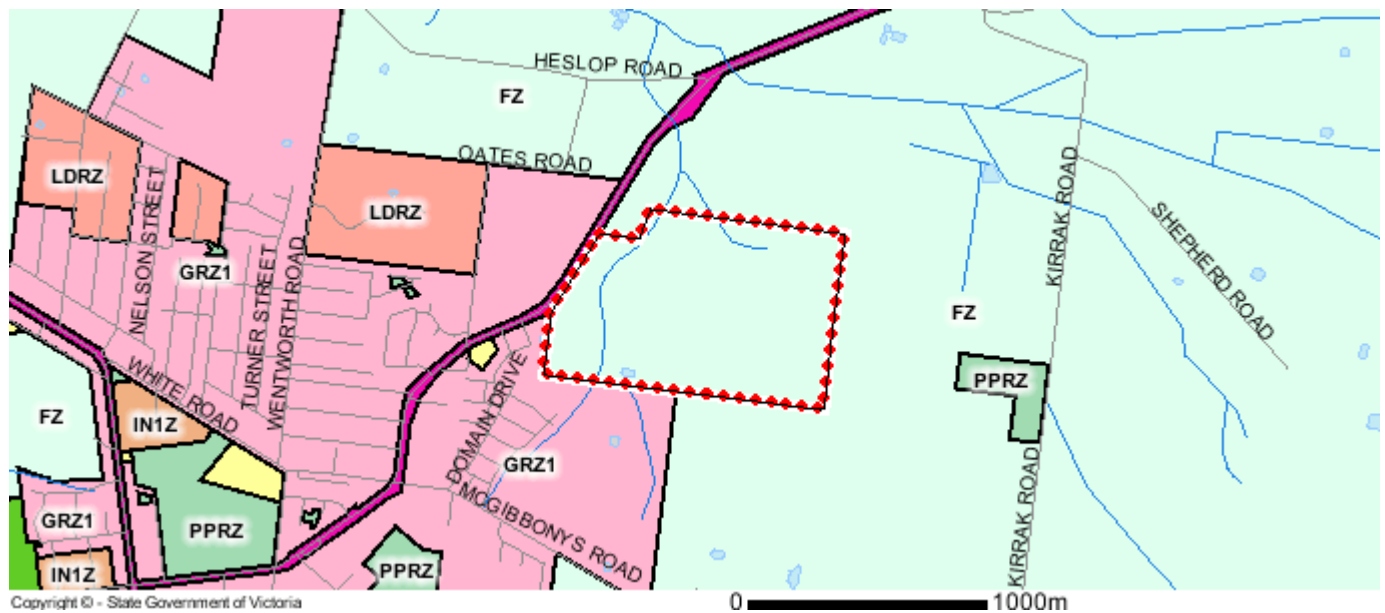
## STATE ELECTORATES

Legislative Council: **EASTERN VICTORIA**  
Legislative Assembly: **BASS**

## Planning Zones

### [FARMING ZONE \(FZ\)](#)

### [SCHEDULE TO THE FARMING ZONE \(FZ\)](#)



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|                                      |                                       |                                       |
|--------------------------------------|---------------------------------------|---------------------------------------|
| C2Z - Commercial 2                   | FZ - Farming                          | GRZ - General Residential             |
| IN1Z - Industrial 1                  | LDRZ - Low Density Residential        | PCRZ - Public Conservation & Resource |
| PPRZ - Public Park & Recreation      | PUZ1 - Public Use - Service & Utility | PUZ2 - Public Use - Education         |
| PUZ3 - Public Use - Health Community | RDZ1 - Road - Category 1              |                                       |

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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## Planning Overlay

None affecting this land - there are overlays in the vicinity

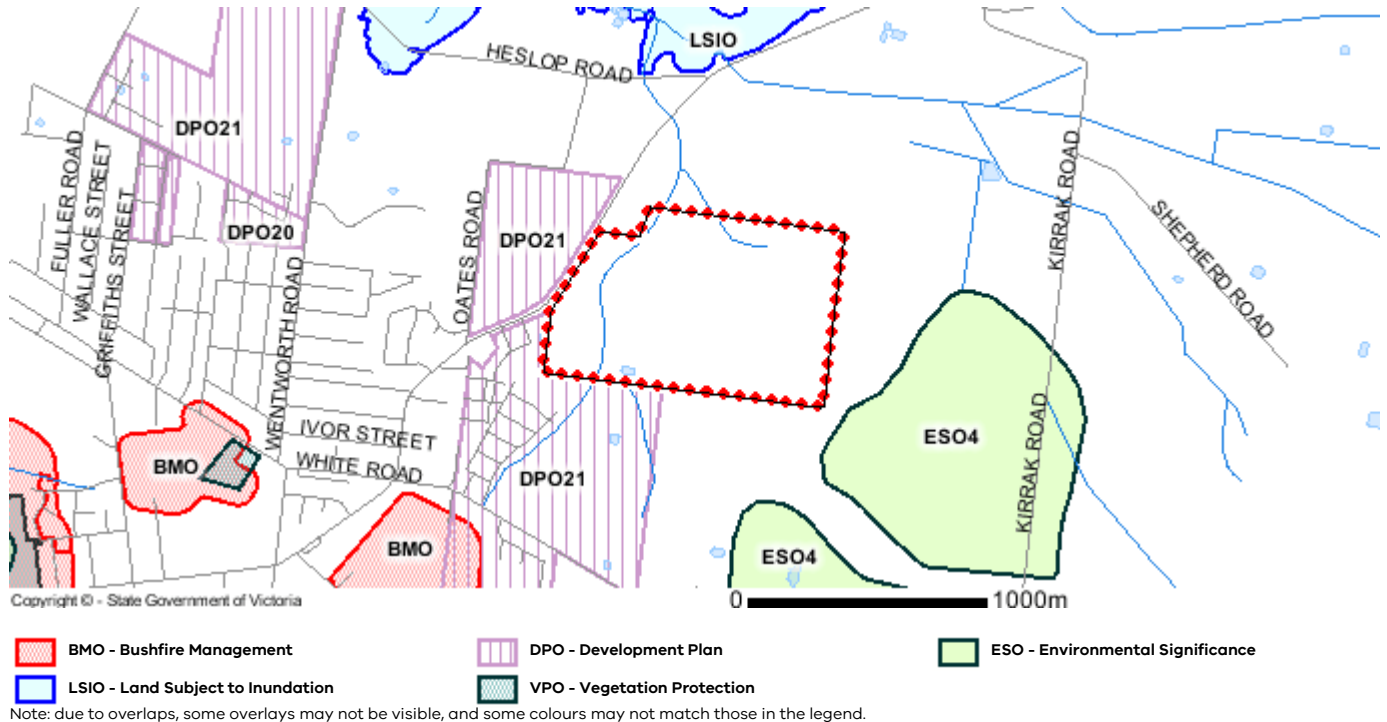
[BUSHFIRE MANAGEMENT OVERLAY \(BMO\)](#)

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[ENVIRONMENTAL SIGNIFICANCE OVERLAY \(ESO\)](#)

[LAND SUBJECT TO INUNDATION OVERLAY \(LSIO\)](#)

[VEGETATION PROTECTION OVERLAY \(VPO\)](#)



## Further Planning Information

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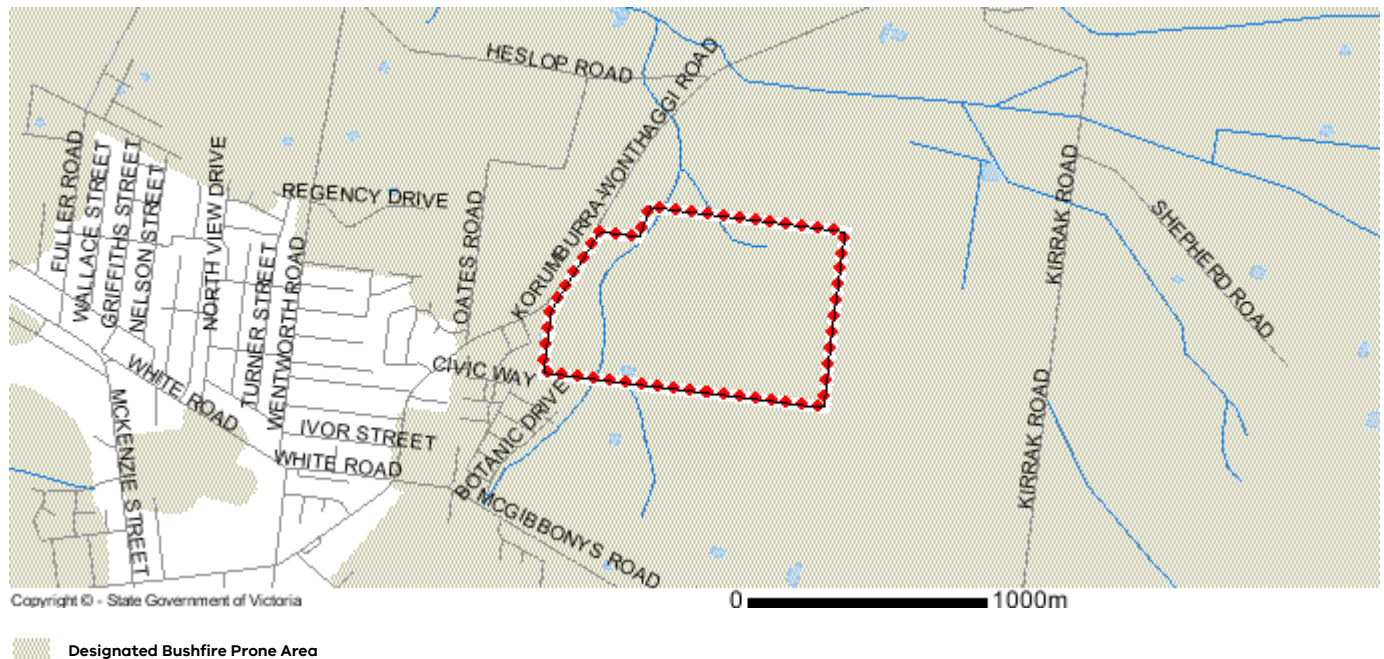
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For other information about planning in Victoria visit <https://www.planning.vic.gov.au>



## Designated Bushfire Prone Area

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Special bushfire construction requirements apply. Planning provisions may apply.**



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**Map Created on 05-Oct-2018**
**Scale 1:2,500**



# Planning Property Report

from [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 08:24 AM

**Address:** 5246A-5246C BASS HIGHWAY WONTHAGGI 3995

**Lot and Plan Number:** Plan CP172891

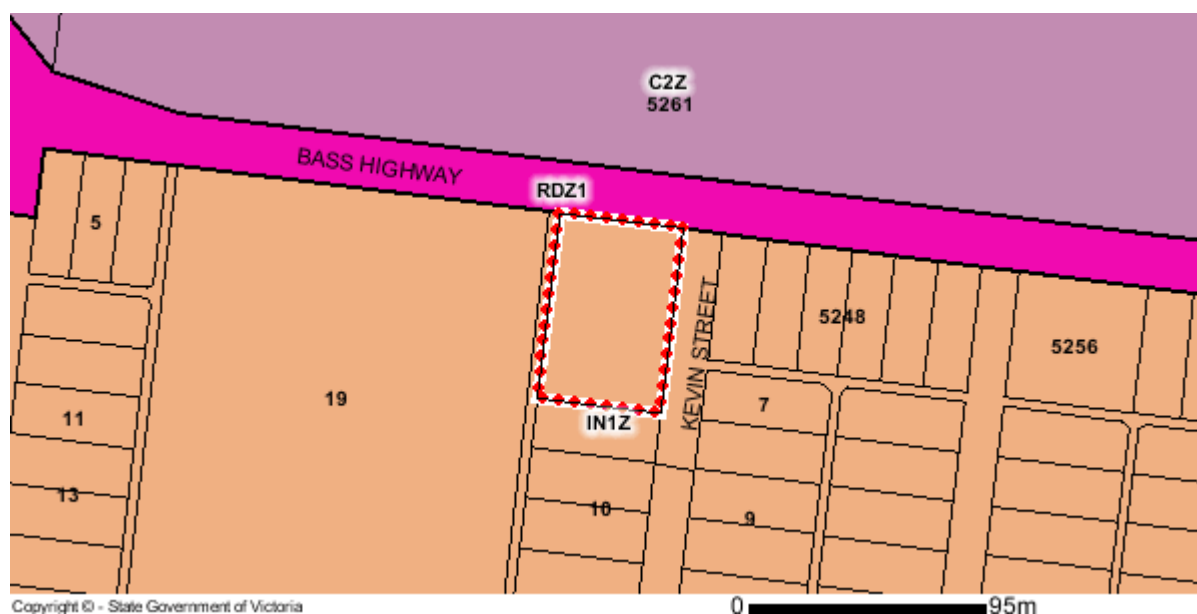
**Local Government (Council):** BASS COAST **Council Property Number:** 121100027.5000

**Directory Reference:** VicRoads 713 U6

## Planning Zone

[INDUSTRIAL 1 ZONE \(IN1Z\)](#)

[SCHEDULE TO THE INDUSTRIAL 1 ZONE \(IN1Z\)](#)



Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

### Zones Legend

|                                 |                                          |                           |
|---------------------------------|------------------------------------------|---------------------------|
| ACZ - Activity Centre           | IN1Z - Industrial 1                      | R1Z - General Residential |
| B1Z - Commercial 1              | IN2Z - Industrial 2                      | R2Z - General Residential |
| B2Z - Commercial 1              | IN3Z - Industrial 3                      | R3Z - General Residential |
| B3Z - Commercial 2              | LDRZ - Low Density Residential           | RAZ - Rural Activity      |
| B4Z - Commercial 2              | MUZ - Mixed Use                          | RCZ - Rural Conservation  |
| B5Z - Commercial 1              | NRZ - Neighbourhood Residential          | RDZ1 - Road - Category 1  |
| C1Z - Commercial 1              | PCRZ - Public Conservation & Resource    | RDZ2 - Road - Category 2  |
| C2Z - Commercial 2              | PDZ - Priority Development               | RGZ - Residential Growth  |
| CA - Commonwealth Land          | PPRZ - Public Park & Recreation          | RLZ - Rural Living        |
| CCZ - Capital City              | PUZ1 - Public Use - Service & Utility    | RUZ - Rural               |
| CDZ - Comprehensive Development | PUZ2 - Public Use - Education            | SUZ - Special Use         |
| DZ - Dockland                   | PUZ3 - Public Use - Health Community     | TZ - Township             |
| ERZ - Environmental Rural       | PUZ4 - Public Use - Transport            | UFZ - Urban Floodway      |
| FZ - Farming                    | PUZ5 - Public Use - Cemetery/Crematorium | UGZ - Urban Growth        |
| GRZ - General Residential       | PUZ6 - Public Use - Local Government     |                           |
| GWAZ - Green Wedge A            | PUZ7 - Public Use - Other Public Use     |                           |
| GWZ - Green Wedge               | PZ - Port                                |                           |

- - - - - Urban Growth Boundary  
 + + + + + Railway    + + + + + Tram    ——— River, stream    Lake, waterbody

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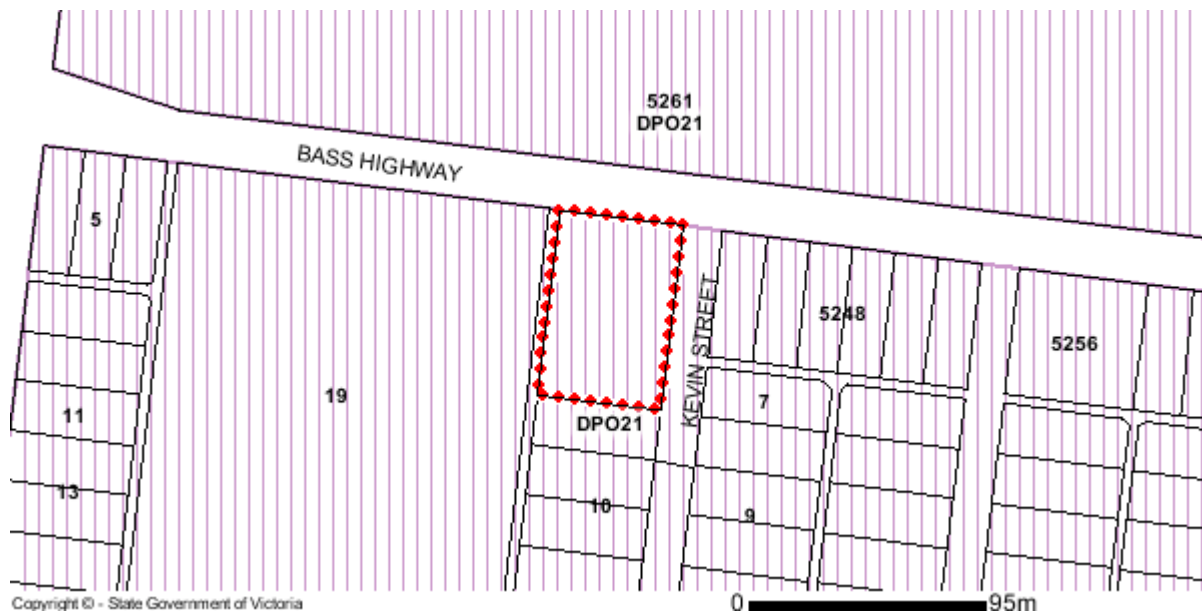
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## Planning Overlay

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[DEVELOPMENT PLAN OVERLAY - SCHEDULE 21 \(DPO21\)](#)



### OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

[BUSHFIRE MANAGEMENT OVERLAY \(BMO\)](#)

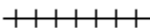


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## Planning Overlays Legend

### Overlays Legend

|                                                                                                                            |                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
|  AEO - Airport Environs                   |  IPO - Incorporated Plan              |
|  BMO - Bushfire Management                |  LSIO - Land Subject to Inundation    |
|  CLPO - City Link Project                 |  MAEO1 - Melbourne Airport Environs 1 |
|  DCPO - Development Contributions Plan    |  MAEO2 - Melbourne Airport Environs 2 |
|  DDO - Design & Development               |  NCO - Neighbourhood Character        |
|  DDOPT - Design & Development Part        |  PD - Parking                         |
|  DPO - Development Plan                   |  PAO - Public Acquisition             |
|  EAO - Environmental Audit                |  RO - Restructure                     |
|  EMO - Erosion Management                 |  RCO - Road Closure                   |
|  ESO - Environmental Significance         |  SBO - Special Building               |
|  FO - Floodway                            |  SLO - Significant Landscape          |
|  HO - Heritage                            |  SMO - Salinity Management            |
|  ICPO - Infrastructure Contributions Plan |  SRD - State Resource                 |
|                                                                                                                            |  VPD - Vegetation Protection          |
|  Railway                                  |  Tram                                 |
|  River, stream                            |  Lake, waterbody                     |

Note: due to overlaps some colours on the maps may not match those in the legend.

## Further Planning Information

Planning scheme data last updated on 26 September 2018.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

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# Planning Property Report

from [www.planning.vic.gov.au](http://www.planning.vic.gov.au) on 05 October 2018 08:31 AM

**Address:** 10 KEVIN STREET WONTHAGGI 3995

**Lot and Plan Number:** Lot 14 LP11690

**Local Government (Council):** BASS COAST **Council Property Number:** 121100025.0000

**Directory Reference:** VicRoads 713 U6

This property has 6 parcels.

For full parcel details get the free Basic Property report at [Property Reports](#)

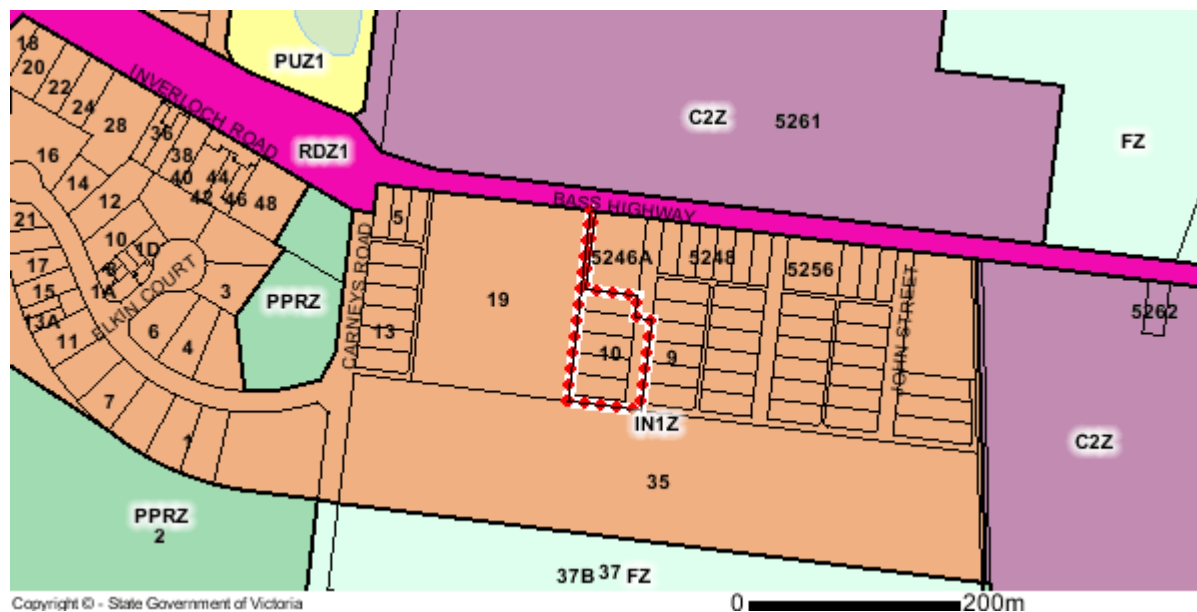
See next page for planning information



## Planning Zone

INDUSTRIAL 1 ZONE (IN1Z)

SCHEDULE TO THE INDUSTRIAL 1 ZONE (IN1Z)



Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

### Zones Legend

|                                 |                                          |                           |
|---------------------------------|------------------------------------------|---------------------------|
| ACZ - Activity Centre           | IN1Z - Industrial 1                      | R1Z - General Residential |
| B1Z - Commercial 1              | IN2Z - Industrial 2                      | R2Z - General Residential |
| B2Z - Commercial 1              | IN3Z - Industrial 3                      | R3Z - General Residential |
| B3Z - Commercial 2              | LDRZ - Low Density Residential           | RAZ - Rural Activity      |
| B4Z - Commercial 2              | MUZ - Mixed Use                          | RCZ - Rural Conservation  |
| B5Z - Commercial 1              | NRZ - Neighbourhood Residential          | RDZ1 - Road - Category 1  |
| C1Z - Commercial 1              | PCRZ - Public Conservation & Resource    | RDZ2 - Road - Category 2  |
| C2Z - Commercial 2              | PDZ - Priority Development               | RGZ - Residential Growth  |
| CA - Commonwealth Land          | PPRZ - Public Park & Recreation          | RLZ - Rural Living        |
| CCZ - Capital City              | PUZ1 - Public Use - Service & Utility    | RUZ - Rural               |
| CDZ - Comprehensive Development | PUZ2 - Public Use - Education            | SUZ - Special Use         |
| DZ - Dockland                   | PUZ3 - Public Use - Health Community     | TZ - Township             |
| ERZ - Environmental Rural       | PUZ4 - Public Use - Transport            | UFZ - Urban Floodway      |
| FZ - Farming                    | PUZ5 - Public Use - Cemetery/Crematorium | UGZ - Urban Growth        |
| GRZ - General Residential       | PUZ6 - Public Use - Local Government     |                           |
| GWAZ - Green Wedge A            | PUZ7 - Public Use - Other Public Use     |                           |
| GWZ - Green Wedge               | PZ - Port                                |                           |

- - - - - Railway    - - - - - Tram    - - - - - River, stream    Lake, waterbody  
 - - - - - Urban Growth Boundary

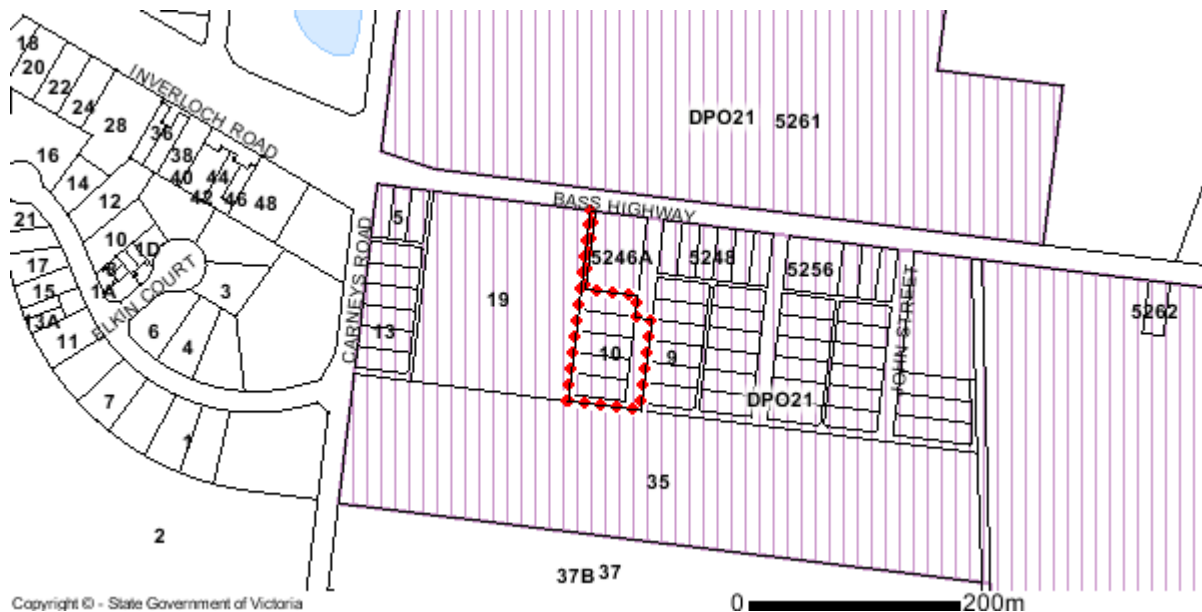
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## Planning Overlay

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)

[DEVELOPMENT PLAN OVERLAY - SCHEDULE 21 \(DPO21\)](#)



### OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

[BUSHFIRE MANAGEMENT OVERLAY \(BMO\)](#)

[ENVIRONMENTAL SIGNIFICANCE OVERLAY \(ESO\)](#)

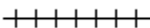


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## Planning Overlays Legend

### Overlays Legend

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|  EMO - Erosion Management                 |  RCO - Road Closure                   |
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|  FO - Floodway                            |  SLO - Significant Landscape          |
|  HO - Heritage                            |  SMO - Salinity Management            |
|  ICPO - Infrastructure Contributions Plan |  SRD - State Resource                 |
|                                                                                                                            |  VPD - Vegetation Protection          |
|  Railway                                  |  Tram                                 |
|  River, stream                            |  Lake, waterbody                     |

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## **Appendix D** – Assessment of applicable criteria



# 1. Assessment of Applicable Criteria

## 1.1 Soil assessment criteria

In June 2002, the Victorian Government, *State Environment Protection Policy* (SEPP) (Prevention and Management of Contaminated Land) (Land SEPP) was gazetted by the Governor in Council. The policy applies to all land in the State of Victoria and is enforceable under Section 16 of the Environment Protection Act.

The Land SEPP policy provides beneficial uses to be protected under a number of different land use scenarios, and provides indicators and objectives for protection of land. The Land SEPP endorses the NEPM 1999 as the key guidance document in contamination assessment and confirms that the ecological and human health investigation levels provided in the NEPM 1999 are the key objectives to be met for the protection of the beneficial uses of land. This NEPM document has recently been updated to NEPM 1999 (as amended 2013), including updated ecological and human health investigation levels and guidelines.

The Land SEPP provides a framework for deciding which beneficial uses need to be protected having regard for the existing and intended uses of a site. The proposed uses of the study properties were provided to GHD in the Victorian Planning Authority (VPA) Plan 3 – Future Urban Structure: Wonthaggi Precinct Structure Plan. In accordance with the Land SEPP, the protected beneficial uses associated with the proposed residential, school, community facilities and open space use are:

- Maintenance of ecosystems (modified ecosystems);
- Human health;
- Buildings and structures;
- Aesthetics; and
- Production of flora and fauna.

### 1.1.1 Ecological criteria

In accordance with the Land SEPP, the Ecological Investigation levels (EILs) provided in the NEPM 1999 were previously adopted as the environmental screening criteria for heavy metals. EILs are intended to be adopted for the assessment of existing contamination only and are used to prompt more detailed site-specific investigations where they are exceeded.

The NEPM 1999 was amended in 2013. The NEPM 1999 (amended 2013) recommends for derivation of site specific EILs using soil characteristics, background or natural concentrations and added contaminant limits (ACLs) provided.

Ecological Screening Levels (ESLs) provided in the NEPM 1999, as amended in 2013, have been adopted in place of the former EILs, as the criteria for the assessment of petroleum hydrocarbons and associated chemicals. The ESLs apply to TRH and associated contaminants in a range of land uses including residential (standard, low and high density), parks, recreational open space and playing fields, and commercial / industrial. The ESLs also account for site-specific soil types.



Conservative EILs can be assumed using the ACLs provided within the NEPM alongside the generic EILs provided for limited contaminants (arsenic, DDT and naphthalene). This approach has been adopted for these works.

#### **1.1.2 Human health criteria**

In accordance with the requirements of the Land SEPP, the Health Investigation Levels (HILs) provided in the NEPM 1999, as amended in 2013, have been adopted for the assessment of Human Health. Some of the properties are proposed to be developed for a more sensitive use (i.e. low density residential), as such, the criteria adopted for this assessment was the NEPM 1999 (as amended 2013) HIL-A (residential).

Health Screening Levels (HSLs) provided in the NEPM 1999, as amended in 2013, have been adopted as the criteria for the assessment of petroleum hydrocarbons and associated chemicals. The HSLs are based on levels developed by Friebel and Nadebaum in 2001 for the Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE). The HSLs apply to petroleum hydrocarbons and associated contaminants in a range of land uses including residential (standard, low and high density), parks, recreational open space and playing fields, and commercial / industrial. The HSLs also account for site-specific soil type and contamination depth.

#### **1.1.3 Buildings and structures**

As specified in the Land SEPP, contamination must not cause land to become corrosive or adversely affect the structural integrity of building materials or structures. To assess this beneficial use the concentrations of contaminants likely to affect the integrity of building materials (including pH, sulphate, redox potential and salinity) must be assessed. This beneficial use was not reviewed during these works, as it fell beyond the scope of the Phase 1 Preliminary Site Investigation.

#### **1.1.4 Aesthetics**

As specified in the Land SEPP, protection of the 'Aesthetics' beneficial use requires that contamination must not cause land to become offensive to the senses of humans. This includes visual aesthetics, olfactory (smell) and taste.

#### **1.1.5 Production of flora and fauna**

The Land SEPP requires that "Contamination of land must not:

- (i) adversely affect produce quality or yield; and
- (ii) affect the level of any indicator in food, flora and fibre produced at the site (or that may be produced) such that the level of that indicator is greater than that specified by the *Australia, New Zealand Food Authority, Food Standards Code*", 1987.

The SEPP specifies any chemical substance or waste including those in the National Environmental Protection (Assessment of Site Contamination) Measure, Schedule B(2), Appendix A.

This beneficial use has not been assessed as the proposed use is residential, school, community facilities and open space use.



## **Appendix E** – Photographic log

**Table E1      Photographs of the properties**

| No. | Location/<br>Description                                                                                                                                                   | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 1.  | <p><b>Property No. 34</b></p> <p>View of the entrance to the property located along the southern boundary of the site, facing west.</p>                                    |   |
| 2.  | <p><b>Property No. 34</b></p> <p>View of the central portion of the property, facing north. Storage tanks for potable water are visible on the left of the photograph.</p> |  |

| No. | Location/<br>Description                                                                                                                                     | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 3.  | <p><b>Property No. 34</b></p> <p>View of the northern portion of the property, facing east. The shop building is visible on the right of the photograph.</p> |   |
| 4.  | <p><b>Property No. 34</b></p> <p>View inside of the shop building, facing northwest. The drainage trench is visible in the foreground of the photograph.</p> |  |



| No. | Location/<br>Description                                                                                                                                          | Photograph                                                                           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 5.  | <p><b>Property No. 34</b></p> <p>View of spills and leaks of automotive fluids/oils onto the concrete apron located south of the shop building, facing north.</p> |   |
| 6.  | <p><b>Property No. 34</b></p> <p>View of the gravel surface staining located south of the shop building, facing west.</p>                                         |  |

| No. | Location/<br>Description                                                                                                                                                                                                                | Photograph                                                                           |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 7.  | <p><b>Property No. 34</b></p> <p>View of some of the rubbish stored on the northern portion of the property, facing south. A swampy area, with empty pails and chemical containers, is visible in the foreground of the photograph.</p> |   |
| 8.  | <p><b>Property No. 34</b></p> <p>View of an area where rubbish, including used oil and automotive parts, was stored. An area of ashes and rubbish visible in the foreground of the photograph indicates burning of rubbish on-site.</p> |  |



| No. | Location/<br>Description                                                                      | Photograph                                                                           |
|-----|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 9.  | <b>Property No. 35</b><br><br>View of the southern portion of the property, facing northeast. |   |
| 10. | <b>Property No. 35</b><br><br>View of the western portion of the property, facing north.      |  |



| No. | Location/<br>Description                                                                                                                                                                                                                                                                                                     | Photograph                                                                           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 11. | <p><b>Property No. 35</b></p> <p>View of the southern portion of the property, facing southeast. Chemical drums on the surface of the site are visible in the photograph.</p>                                                                                                                                                |   |
| 12. | <p><b>Property No. 35</b></p> <p>View of the concrete pad located on the southern portion of the property, facing north. The concrete pad indicates the location of the former garage building. The residential building located on the northern portion of the property is visible in the background of the photograph.</p> |  |

| No. | Location/<br>Description                                                                                                                                                   | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 13. | <p><b>Property No. 35</b></p> <p>View of the concrete pad located on the southern portion of the property, facing southwest.</p>                                           |   |
| 14. | <p><b>Property No. 35</b></p> <p>View of the southern portion of the property, facing west. An unknown pit or basement is visible in the foreground of the photograph.</p> |  |



| No. | Location/<br>Description                                                                                                                                                          | Photograph                                                                           |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 15. | <p><b>Property No. 36</b></p> <p>View of the building from the entrance to the property, facing northwest. Tanks for potable water are visible on the left of the photograph.</p> |   |
| 16. | <p><b>Property No. 36</b></p> <p>View of the western portion of the property, facing west.</p>                                                                                    |  |



| No. | Location/<br>Description                                                                                                                                               | Photograph                                                                           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 17. | <p><b>Property No. 36</b></p> <p>View of the building and parking area on the northern portion of the property, facing south.</p>                                      |   |
| 18. | <p><b>Property No. 36</b></p> <p>View of the northeastern portion of the property, facing east. Piles of firewood are visible in the background of the photograph.</p> |  |

| No. | Location/<br>Description                                                                                 | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 19. | <b>Property No. 36</b><br><br>View of the eastern portion of the property, facing southeast.             |   |
| 20. | <b>Property No. 36</b><br><br>View of the rubbish observed on the southeastern boundary of the property. |  |

| No. | Location/<br>Description                                                                                                                                             | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 21. | <p><b>Property No. 36</b></p> <p>View of the empty steel drums and plastic tank located on the southeastern boundary of the property.</p>                            |   |
| 22. | <p><b>Property No. 36</b></p> <p>View of the storage area for vehicle parts and used oil located adjacent to the east of the storage building, facing northwest.</p> |  |



| No. | Location/<br>Description                                                                                                             | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 23. | <b>Property No. 36</b><br><br>View inside of the storage building, facing south. Pails of lubricating oils are visible in this area. |   |
| 24. | <b>Property No. 36</b><br><br>View inside of the storage building, facing west.                                                      |  |

| No. | Location/<br>Description                                                 | Photograph                                                                           |
|-----|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 25. | <b>Property No. 37</b><br><br>View of the property,<br>facing southeast. |   |
| 26. | <b>Property No. 37</b><br><br>View of the property,<br>facing north.     |  |

| No. | Location/<br>Description                                                                                                                                                                                                 | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 27. | <p><b>Property No. 37</b></p> <p>View of the northwestern portion of the property, facing north. Animal tracks leading to the north adjacent property are visible on the left of the photograph.</p>                     |   |
| 28. | <p><b>Property No. 37</b></p> <p>View of the northwestern portion of the property, facing northwest. A drain pipe is visible on the left of the photograph. The drain pipe originated on the west adjacent property.</p> |  |



| No. | Location/<br>Description                                                                                                                        | Photograph                                                                           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 29. | <p><b>Property No. 37</b></p> <p>View of the west adjacent property, facing west. The drain pipe is visible on the right of the photograph.</p> |   |
| 30. | <p><b>Property No. 37</b></p> <p>View of the drain pipe and surface soils on the northwestern portion of the property.</p>                      |  |

| No. | Location/<br>Description                                                                                                                                       | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 31. | <b>Property No. 38</b><br><br>View of the eastern portion of the property, facing north.                                                                       |   |
| 32. | <b>Property No. 38</b><br><br>View of the northern portion of the property, facing east. A water storage container is visible in the centre of the photograph. |  |



| No. | Location/<br>Description                                                                                                                             | Photograph                                                                           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 33. | <b>Property No. 38</b><br><br>View of the central portion of the property, facing south. Electric fencing is visible on the right of the photograph. |   |
| 34. | <b>Property No. 38</b><br><br>View of the western portion of the property, facing northwest.                                                         |  |



| No. | Location/<br>Description                                                                                                                                   | Photograph                                                                           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 35. | <b>Property No. 38</b><br><br>View of the drainage canal located in the southwestern portion of the property, facing southwest.                            |   |
| 36. | <b>Property No. 38</b><br><br>View of the western portion of the property, facing west. The drainage canal is visible in the foreground of the photograph. |  |

| No. | Location/<br>Description                                                                                                           | Photograph                                                                           |
|-----|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 37. | <p><b>Property No. 39</b></p> <p>View of the entrance to the property located on the western portion of the site, facing east.</p> |   |
| 38. | <p><b>Property No. 39</b></p> <p>View of the northern portion of the property, facing east.</p>                                    |  |

| No. | Location/<br>Description                                                                                                                                     | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 39. | <p><b>Property No. 39</b></p> <p>View of the former abattoir building located on the northern portion of the property, facing east.</p>                      |   |
| 40. | <p><b>Property No. 39</b></p> <p>View of the former abattoir building, facing west.</p> <p>Asbestos-containing material may be present at this building.</p> |  |



| No. | Location/<br>Description                                                                                                                                                                                                 | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 41. | <p><b>Property No. 39</b></p> <p>View of the former milking shed located on the northeastern portion of the property, facing northeast.</p>                                                                              |   |
| 42. | <p><b>Property No. 39</b></p> <p>View inside of the milking shed, facing north. A pit is present along the central portion of the milking shed. Pails of automotive oils are visible on the right of the photograph.</p> |  |

| No. | Location/<br>Description                                                                                                                                                                                                                                  | Photograph                                                                           |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 43. | <p><b>Property No. 39</b></p> <p>View of the rubbish storage area located on the southeastern portion of the property, facing west. A shop building and a diesel fuel aboveground storage tank (AST) are visible in the background of the photograph.</p> |   |
| 44. | <p><b>Property No. 39</b></p> <p>View of the diesel fuel AST located adjacent to the north of the shop building, facing west. Minor staining was visible on the gravel surface surrounding the AST.</p>                                                   |  |

| No. | Location/<br>Description                                                                                                                                                                      | Photograph                                                                           |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 45. | <p><b>Property No. 39</b></p> <p>View of a rubbish storage area on the eastern portion of the property, facing east. Used oil containers are visible in the foreground of the photograph.</p> |   |
| 46. | <p><b>Property No. 39</b></p> <p>View of the surface staining observed around the used oil storage containers.</p>                                                                            |  |



| No. | Location/<br>Description                                                                                                                                             | Photograph                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 47. | <p><b>Property No. 39</b></p> <p>View of the automotive parts stored on the southeastern portion of the property. Surface staining was visible in this location.</p> |  <p>This photograph shows a cluttered outdoor area with various automotive parts and debris. In the foreground, there are several black tires stacked together, a blue plastic bucket, and some crumpled white paper or cardboard. In the background, there are more tires, a green metal drum, and various metal pipes and rods scattered on the ground. The area appears to be a storage yard for automotive parts.</p> |
| 48. | <p><b>Property No. 39</b></p> <p>View of an area of the property, near the former milking shed, where spills of hydrocarbon fluids was observed.</p>                 |  <p>This photograph shows a dark, irregularly shaped stain on the ground, which appears to be a spill of hydrocarbon fluids. The stain is located near a building with a corrugated metal roof. In the foreground, there is a red and white fire extinguisher and some other debris. The area is overgrown with grass and weeds.</p>                                                                                     |

| No. | Location/<br>Description                                                                                                                                                                                           | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 49. | <p><b>Property No. 39</b></p> <p>View of the residential building located on the southwestern portion of the property, facing south.</p>                                                                           |   |
| 50. | <p><b>Property No. 39</b></p> <p>View of the garden and residential building located on the southwestern portion of the property, facing west. A water storage tank is visible on the right in the photograph.</p> |  |



| No. | Location/<br>Description                                                                                                                                                            | Photograph                                                                           |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 51. | <b>Property No. 39</b><br><br>View of the garden on the southwestern portion of the property, facing west.                                                                          |   |
| 52. | <b>Property No. 39</b><br><br>View of the storage yard on the southeastern portion of the property, facing east. Property number 40 is visible in the background of the photograph. |  |



| No. | Location/<br>Description                                                                     | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 53. | <b>Property No. 40</b><br><br>View of the western portion of the property, facing southeast. |   |
| 54. | <b>Property No. 40</b><br><br>View of the northern portion of the property, facing north.    |  |

| No. | Location/<br>Description                                                                                             | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 55. | <b>Property No. 40</b><br><br>View of the southern boundary of the property, facing east.                            |   |
| 56. | <b>Property No. 40</b><br><br>View of the dam located on the southwestern portion of the property, facing northwest. |  |

| No. | Location/<br>Description                                                                                                                             | Photograph                                                                           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 57. | <b>Property No. 40</b><br><br>View of the eastern portion of the property, facing northeast.                                                         |   |
| 58. | <b>Property No. 40</b><br><br>View of the location of the former hay shed that was located on the northeastern portion of the property, facing west. |  |



| No. | Location/<br>Description                     | Photograph                                                                                                                                                                                                                                                                                                                                                                           |
|-----|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 59. | <b>Property No. 60-65</b><br><br>View of the |  <p>A photograph showing a large black sign with 'CARLINE' in red and white, 'MUFFLERS' in white, and 'PHONE 56 72 13 13' in white. The sign is on a metal pole. In the background, there is a white building with 'Gus's Auto' written on it, and a gravel lot with some vehicles and tires.</p> |
| 60. | <b>Property No. 60-65</b><br><br>View of the |  <p>A photograph showing a white building with a red brick base, labeled 'DUNLOP HYPER DEALER' and 'T FOR TYRES 56 72 13 13'. A gold-colored sedan is parked in front of the building. There are several tires stacked near the entrance.</p>                                                    |

| No. | Location/<br>Description                                                                                                                   | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 61. | <p><b>Property No. 60-65</b></p> <p>View of the sheetmetal business located on the northwestern portion of the property, facing south.</p> |   |
| 62. | <p><b>Property No. 60-65</b></p> <p>View of the western boundary of the property, facing north.</p>                                        |  |

| No. | Location/<br>Description                                                                                                                                                                                                                                                                                       | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 63. | <p><b>Property No. 60-65</b></p> <p>View of the central portion of the property, facing east.</p>                                                                                                                                                                                                              |   |
| 64. | <p><b>Property No. 60-65</b></p> <p>View of the central portion of the property, facing north. Greg's Panels shop building is visible in the background of the photograph. The paint shop building is visible on the left of the photograph. A storage building is visible on the right of the photograph.</p> |  |



| No. | Location/<br>Description                                                                                                                                 | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 65. | <b>Property No. 60-65</b><br><br>View of the central portion of the property, facing northwest.                                                          |   |
| 66. | <b>Property No. 60-65</b><br><br>View of the central portion of the property, facing east. A storage building is visible on the right of the photograph. |  |

| No. | Location/<br>Description                                                                                                                                                                       | Photograph                                                                           |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 67. | <p><b>Property No. 60-65</b></p> <p>View of the eastern boundary of the property, facing southeast.</p>                                                                                        |   |
| 68. | <p><b>Property No. 60-65</b></p> <p>View inside of the paint shop building, facing northeast. Chemical and paint contains are stored inside the building on shelves or the concrete floor.</p> |  |

| No. | Location/<br>Description                                                                                                               | Photograph                                                                           |
|-----|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 69. | <p><b>Property No. 60-65</b></p> <p>View inside of the dry-floor paint room, located inside the paint shop building, facing south.</p> |   |
| 70. | <p><b>Property No. 60-65</b></p> <p>View inside of the shop building located on the southwestern portion of the property.</p>          |  |



| No. | Location/<br>Description                                                                                                                         | Photograph                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 71. | <p><b>Property No. 60-65</b></p> <p>View inside of the storage building located on the central portion of the property.</p>                      |   |
| 72. | <p><b>Property No. 60-65</b></p> <p>View of the scrap metal and equipment located on the southeastern portion of the property, facing south.</p> |  |

## **Appendix F** – Laboratory analytical report

## CERTIFICATE OF ANALYSIS

|                                |                                                                     |                                |                                                     |
|--------------------------------|---------------------------------------------------------------------|--------------------------------|-----------------------------------------------------|
| <b>Work Order</b>              | <b>: EM1814874</b>                                                  | <b>Page</b>                    | <b>: 1 of 35</b>                                    |
| <b>Client</b>                  | <b>: GHD PTY LTD</b>                                                | <b>Laboratory</b>              | <b>: Environmental Division Melbourne</b>           |
| <b>Contact</b>                 | <b>: KORY AUCH</b>                                                  | <b>Contact</b>                 | <b>: Shirley LeCornu</b>                            |
| <b>Address</b>                 | <b>: LEVEL 8, 180 LONSDALE ST<br/>MELBOURNE VIC, AUSTRALIA 3001</b> | <b>Address</b>                 | <b>: 4 Westall Rd Springvale VIC Australia 3171</b> |
| <b>Telephone</b>               | <b>: ----</b>                                                       | <b>Telephone</b>               | <b>: +61-3-8549 9630</b>                            |
| <b>Project</b>                 | <b>: 3136558</b>                                                    | <b>Date Samples Received</b>   | <b>: 14-Sep-2018 09:45</b>                          |
| <b>Order number</b>            | <b>: ----</b>                                                       | <b>Date Analysis Commenced</b> | <b>: 17-Sep-2018</b>                                |
| <b>C-O-C number</b>            | <b>: ----</b>                                                       | <b>Issue Date</b>              | <b>: 21-Sep-2018 16:15</b>                          |
| <b>Sampler</b>                 | <b>: ISAAC, KORY AUCH</b>                                           |                                |                                                     |
| <b>Site</b>                    | <b>: Wonthaggi PSP - Preliminary Site Investigation</b>             |                                |                                                     |
| <b>Quote number</b>            | <b>: ME/373/17</b>                                                  |                                |                                                     |
| <b>No. of samples received</b> | <b>: 28</b>                                                         |                                |                                                     |
| <b>No. of samples analysed</b> | <b>: 28</b>                                                         |                                |                                                     |



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.

| <i>Signatories</i> | <i>Position</i>          | <i>Accreditation Category</i>         |
|--------------------|--------------------------|---------------------------------------|
| Dilani Fernando    | Senior Inorganic Chemist | Melbourne Inorganics, Springvale, VIC |
| Nancy Wang         | 2IC Organic Chemist      | Melbourne Inorganics, Springvale, VIC |
| Nancy Wang         | 2IC Organic Chemist      | Melbourne Organics, Springvale, VIC   |
| Xing Lin           | Senior Organic Chemist   | Melbourne Organics, Springvale, VIC   |





## 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.

- EG035T: EM1814707 #1 Poor matrix spike recovery for dissolved mercury due to sample matrix. Confirmed by re-extraction and re-analysis.
- EP068/066: Particular sample (EM1814874\_010) required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) 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), Dibenzo(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.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) 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), Dibenzo(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                     |            |      |       | SS01-120918_034   | SS02-120918_034   | SS03-120918_034   | SS04-120918_037   | SS05-120918_037   |
|---------------------------------------------------------------------|------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                         |            |      |       | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                            | CAS Number | LOR  | Unit  | EM1814874-001     | EM1814874-002     | EM1814874-003     | EM1814874-004     | EM1814874-005     |
|                                                                     |            |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EA055: Moisture Content (Dried @ 105-110°C)</b>                  |            |      |       |                   |                   |                   |                   |                   |
| Moisture Content                                                    | ----       | 1.0  | %     | 18.0              | 5.7               | 19.4              | 37.8              | 23.3              |
| <b>EG005T: Total Metals by ICP-AES</b>                              |            |      |       |                   |                   |                   |                   |                   |
| Barium                                                              | 7440-39-3  | 10   | mg/kg | ----              | ----              | 30                | ----              | 10                |
| Beryllium                                                           | 7440-41-7  | 1    | mg/kg | ----              | ----              | <1                | ----              | <1                |
| Boron                                                               | 7440-42-8  | 50   | mg/kg | ----              | ----              | <50               | ----              | <50               |
| Cobalt                                                              | 7440-48-4  | 2    | mg/kg | ----              | ----              | 4                 | ----              | <2                |
| Manganese                                                           | 7439-96-5  | 5    | mg/kg | ----              | ----              | 125               | ----              | <5                |
| Selenium                                                            | 7782-49-2  | 5    | mg/kg | ----              | ----              | <5                | ----              | <5                |
| Vanadium                                                            | 7440-62-2  | 5    | mg/kg | ----              | ----              | 11                | ----              | <5                |
| Arsenic                                                             | 7440-38-2  | 5    | mg/kg | 76                | <5                | <5                | <5                | <5                |
| Cadmium                                                             | 7440-43-9  | 1    | mg/kg | <1                | <1                | <1                | <1                | <1                |
| Chromium                                                            | 7440-47-3  | 2    | mg/kg | 64                | 55                | 9                 | 6                 | <2                |
| Copper                                                              | 7440-50-8  | 5    | mg/kg | 73                | 39                | 13                | 18                | <5                |
| Lead                                                                | 7439-92-1  | 5    | mg/kg | 11                | <5                | 5                 | 59                | <5                |
| Nickel                                                              | 7440-02-0  | 2    | mg/kg | 30                | 85                | 17                | 4                 | <2                |
| Zinc                                                                | 7440-66-6  | 5    | mg/kg | 171               | 70                | 18                | 135               | <5                |
| <b>EG035T: Total Recoverable Mercury by FIMS</b>                    |            |      |       |                   |                   |                   |                   |                   |
| Mercury                                                             | 7439-97-6  | 0.1  | mg/kg | <0.1              | <0.1              | <0.1              | <0.1              | <0.1              |
| <b>EG048: Hexavalent Chromium (Alkaline Digest)</b>                 |            |      |       |                   |                   |                   |                   |                   |
| Hexavalent Chromium                                                 | 18540-29-9 | 0.5  | mg/kg | ----              | ----              | <0.5              | ----              | <0.5              |
| <b>EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser</b> |            |      |       |                   |                   |                   |                   |                   |
| Weak Acid Dissociable Cyanide                                       | ----       | 1    | mg/kg | ----              | ----              | <1                | ----              | 1                 |
| <b>EP066: Polychlorinated Biphenyls (PCB)</b>                       |            |      |       |                   |                   |                   |                   |                   |
| Total Polychlorinated biphenyls                                     | ----       | 0.1  | mg/kg | ----              | ----              | <0.1              | ----              | <0.1              |
| <b>EP068A: Organochlorine Pesticides (OC)</b>                       |            |      |       |                   |                   |                   |                   |                   |
| alpha-BHC                                                           | 319-84-6   | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| Hexachlorobenzene (HCB)                                             | 118-74-1   | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| beta-BHC                                                            | 319-85-7   | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| gamma-BHC                                                           | 58-89-9    | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| delta-BHC                                                           | 319-86-8   | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| Heptachlor                                                          | 76-44-8    | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| Aldrin                                                              | 309-00-2   | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| Heptachlor epoxide                                                  | 1024-57-3  | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| ^ Total Chlordane (sum)                                             | ----       | 0.05 | mg/kg | <0.05             | <0.05             | ----              | ----              | ----              |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                             |            |     |      | SS01-120918_034   | SS02-120918_034   | SS03-120918_034   | SS04-120918_037   | SS05-120918_037   |
|-----------------------------|------------|-----|------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time |            |     |      | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                    | CAS Number | LOR | Unit | EM1814874-001     | EM1814874-002     | EM1814874-003     | EM1814874-004     | EM1814874-005     |
|                             |            |     |      | Result            | Result            | Result            | Result            | Result            |

### EP068A: Organochlorine Pesticides (OC) - Continued

|                            |                          |      |       |       |       |       |      |       |
|----------------------------|--------------------------|------|-------|-------|-------|-------|------|-------|
| trans-Chlordane            | 5103-74-2                | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| alpha-Endosulfan           | 959-98-8                 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| cis-Chlordane              | 5103-71-9                | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Dieldrin                   | 60-57-1                  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| 4,4'-DDE                   | 72-55-9                  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Endrin                     | 72-20-8                  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| beta-Endosulfan            | 33213-65-9               | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| ^ Endosulfan (sum)         | 115-29-7                 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| 4,4'-DDD                   | 72-54-8                  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Endrin aldehyde            | 7421-93-4                | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Endosulfan sulfate         | 1031-07-8                | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| 4,4'-DDT                   | 50-29-3                  | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | ---- | <0.2  |
| Endrin ketone              | 53494-70-5               | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Methoxychlor               | 72-43-5                  | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | ---- | <0.2  |
| Mirex                      | 2385-85-5                | 0.20 | mg/kg | ----  | ----  | <0.20 | ---- | <0.20 |
| ^ Sum of Aldrin + Dieldrin | 309-00-2/60-57-1         | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| ^ Sum of DDD + DDE + DDT   | 72-54-8/72-55-9/5<br>0-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |

### EP068B: Organophosphorus Pesticides (OP)

|                     |            |      |       |       |       |       |      |       |
|---------------------|------------|------|-------|-------|-------|-------|------|-------|
| Dichlorvos          | 62-73-7    | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Demeton-S-methyl    | 919-86-8   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Monocrotophos       | 6923-22-4  | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | ---- | <0.2  |
| Dimethoate          | 60-51-5    | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Diazinon            | 333-41-5   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Chlorpyrifos-methyl | 5598-13-0  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Parathion-methyl    | 298-00-0   | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | ---- | <0.2  |
| Malathion           | 121-75-5   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Fenthion            | 55-38-9    | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Chlorpyrifos        | 2921-88-2  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Parathion           | 56-38-2    | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | ---- | <0.2  |
| Pirimphos-ethyl     | 23505-41-1 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Chlorfenvinphos     | 470-90-6   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Bromophos-ethyl     | 4824-78-6  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Fenamiphos          | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |
| Prothiofos          | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | ---- | <0.05 |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                          |                   |      |       | Client sample ID | SS01-120918_034   | SS02-120918_034   | SS03-120918_034   | SS04-120918_037   | SS05-120918_037   |
|-------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                    | CAS Number        | LOR  | Unit  |                  | EM1814874-001     | EM1814874-002     | EM1814874-003     | EM1814874-004     | EM1814874-005     |
|                                                             |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | ----              | <0.05             |
| <b>EP068C: Triazines</b>                                    |                   |      |       |                  |                   |                   |                   |                   |                   |
| Atrazine                                                    | 1912-24-9         | 0.05 | mg/kg |                  | ----              | ----              | <0.05             | ----              | <0.05             |
| <b>EP068D: Pyrethroids</b>                                  |                   |      |       |                  |                   |                   |                   |                   |                   |
| Bifenthrin                                                  | 82657-04-3        | 0.05 | mg/kg |                  | ----              | ----              | <0.05             | ----              | <0.05             |
| <b>EP075(SIM)A: Phenolic Compounds</b>                      |                   |      |       |                  |                   |                   |                   |                   |                   |
| Phenol                                                      | 108-95-2          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 2-Chlorophenol                                              | 95-57-8           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 2-Methylphenol                                              | 95-48-7           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 3- & 4-Methylphenol                                         | 1319-77-3         | 1    | mg/kg |                  | ----              | ----              | <1                | <1                | <1                |
| 2-Nitrophenol                                               | 88-75-5           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 2,4-Dimethylphenol                                          | 105-67-9          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 2,4-Dichlorophenol                                          | 120-83-2          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 2,6-Dichlorophenol                                          | 87-65-0           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 4-Chloro-3-methylphenol                                     | 59-50-7           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 2,4,6-Trichlorophenol                                       | 88-06-2           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| 2,4,5-Trichlorophenol                                       | 95-95-4           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | <0.5              | <0.5              |
| Pentachlorophenol                                           | 87-86-5           | 2    | mg/kg |                  | ----              | ----              | <2                | <2                | <2                |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>       |                   |      |       |                  |                   |                   |                   |                   |                   |
| 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              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                     |                   |     |       | Client sample ID | SS01-120918_034   | SS02-120918_034   | SS03-120918_034   | SS04-120918_037   | SS05-120918_037   |
|------------------------------------------------------------------------|-------------------|-----|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                   |     |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                               | CAS Number        | LOR | Unit  |                  | EM1814874-001     | EM1814874-002     | EM1814874-003     | EM1814874-004     | EM1814874-005     |
|                                                                        |                   |     |       | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>      |                   |     |       |                  |                   |                   |                   |                   |                   |
| 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 | ----             | ----              |                   | <b>0.6</b>        | <b>0.6</b>        | <b>0.6</b>        |
| ^ Benzo(a)pyrene TEQ (LOR)                                             | ----              | 0.5 | mg/kg | ----             | ----              |                   | <b>1.2</b>        | <b>1.2</b>        | <b>1.2</b>        |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----              | 10  | mg/kg | <10              | <10               |                   | <10               | <10               | <10               |
| C10 - C14 Fraction                                                     | ----              | 50  | mg/kg | <50              | <50               |                   | <b>50</b>         | <50               | <50               |
| C15 - C28 Fraction                                                     | ----              | 100 | mg/kg | <100             | <b>3130</b>       |                   | <b>220</b>        | <b>130</b>        | <100              |
| C29 - C36 Fraction                                                     | ----              | 100 | mg/kg | <100             | <b>3040</b>       |                   | <b>110</b>        | <b>170</b>        | <100              |
| ^ C10 - C36 Fraction (sum)                                             | ----              | 50  | mg/kg | <50              | <b>6170</b>       |                   | <b>380</b>        | <b>300</b>        | <50               |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10            | 10  | mg/kg | <10              | <10               |                   | <10               | <10               | <10               |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX       | 10  | mg/kg | <10              | <10               |                   | <10               | <10               | <10               |
| >C10 - C16 Fraction                                                    | ----              | 50  | mg/kg | <50              | <50               |                   | <b>80</b>         | <50               | <50               |
| >C16 - C34 Fraction                                                    | ----              | 100 | mg/kg | <100             | <b>5500</b>       |                   | <b>270</b>        | <b>240</b>        | <100              |
| >C34 - C40 Fraction                                                    | ----              | 100 | mg/kg | <100             | <b>1350</b>       |                   | <100              | <100              | <100              |
| ^ >C10 - C40 Fraction (sum)                                            | ----              | 50  | mg/kg | <50              | <b>6850</b>       |                   | <b>350</b>        | <b>240</b>        | <50               |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                           | ----              | 50  | mg/kg | <50              | <50               |                   | <b>80</b>         | <50               | <50               |
| <b>EP080: BTEXN</b>                                                    |                   |     |       |                  |                   |                   |                   |                   |                   |
| Benzene                                                                | 71-43-2           | 0.2 | mg/kg | <0.2             | <0.2              |                   | <0.2              | <0.2              | <0.2              |
| Toluene                                                                | 108-88-3          | 0.5 | mg/kg | <0.5             | <0.5              |                   | <0.5              | <0.5              | <0.5              |
| Ethylbenzene                                                           | 100-41-4          | 0.5 | mg/kg | <0.5             | <0.5              |                   | <0.5              | <0.5              | <0.5              |
| meta- & para-Xylene                                                    | 108-38-3 106-42-3 | 0.5 | mg/kg | <0.5             | <0.5              |                   | <0.5              | <0.5              | <0.5              |
| ortho-Xylene                                                           | 95-47-6           | 0.5 | mg/kg | <0.5             | <0.5              |                   | <0.5              | <0.5              | <0.5              |
| ^ Sum of BTEX                                                          | ----              | 0.2 | mg/kg | <0.2             | <0.2              |                   | <0.2              | <0.2              | <0.2              |
| ^ Total Xylenes                                                        | ----              | 0.5 | mg/kg | <0.5             | <0.5              |                   | <0.5              | <0.5              | <0.5              |
| Naphthalene                                                            | 91-20-3           | 1   | mg/kg | <1               | <1                |                   | <1                | <1                | <1                |
| <b>EP066S: PCB Surrogate</b>                                           |                   |     |       |                  |                   |                   |                   |                   |                   |
| Decachlorobiphenyl                                                     | 2051-24-3         | 0.1 | %     | ----             | ----              |                   | <b>91.8</b>       | ----              | <b>89.2</b>       |



## Analytical Results

|                                                     |            |      |      |                  |                   |                   |                   |                   |                   |
|-----------------------------------------------------|------------|------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)                  |            |      |      | Client sample ID | SS01-120918_034   | SS02-120918_034   | SS03-120918_034   | SS04-120918_037   | SS05-120918_037   |
| Client sampling date / time                         |            |      |      |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                            | CAS Number | LOR  | Unit |                  | EM1814874-001     | EM1814874-002     | EM1814874-003     | EM1814874-004     | EM1814874-005     |
|                                                     |            |      |      | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |            |      |      |                  |                   |                   |                   |                   |                   |
| Dibromo-DDE                                         | 21655-73-2 | 0.05 | %    |                  | 112               | 122               | 107               | ----              | 112               |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |            |      |      |                  |                   |                   |                   |                   |                   |
| DEF                                                 | 78-48-8    | 0.05 | %    |                  | 97.1              | 99.3              | 107               | ----              | 95.2              |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |            |      |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                           | 13127-88-3 | 0.5  | %    |                  | ----              | ----              | 91.8              | 90.6              | 92.3              |
| 2-Chlorophenol-D4                                   | 93951-73-6 | 0.5  | %    |                  | ----              | ----              | 100               | 100               | 102               |
| 2,4,6-Tribromophenol                                | 118-79-6   | 0.5  | %    |                  | ----              | ----              | 82.3              | 85.5              | 88.9              |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |            |      |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                    | 321-60-8   | 0.5  | %    |                  | ----              | ----              | 97.3              | 96.8              | 99.8              |
| Anthracene-d10                                      | 1719-06-8  | 0.5  | %    |                  | ----              | ----              | 98.0              | 99.1              | 101               |
| 4-Terphenyl-d14                                     | 1718-51-0  | 0.5  | %    |                  | ----              | ----              | 93.1              | 91.8              | 93.8              |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |            |      |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                               | 17060-07-0 | 0.2  | %    |                  | 91.8              | 79.0              | 68.7              | 81.4              | 77.1              |
| Toluene-D8                                          | 2037-26-5  | 0.2  | %    |                  | 75.4              | 72.4              | 63.5              | 79.4              | 68.8              |
| 4-Bromofluorobenzene                                | 460-00-4   | 0.2  | %    |                  | 86.2              | 89.1              | 73.1              | 89.2              | 80.6              |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                  |            |      |       | Client sample ID | SS06-120918_035   | SS07-120918_035   | SS08-120918_039   | SS09-120918_039   | SS10-120918_039   |
|---------------------------------------------------------------------|------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                         |            |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                            | CAS Number | LOR  | Unit  |                  | EM1814874-006     | EM1814874-007     | EM1814874-008     | EM1814874-009     | EM1814874-010     |
|                                                                     |            |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EA055: Moisture Content (Dried @ 105-110°C)</b>                  |            |      |       |                  |                   |                   |                   |                   |                   |
| Moisture Content                                                    | ----       | 1.0  | %     |                  | 36.2              | 11.1              | 2.0               | 21.4              | 36.0              |
| <b>EG005T: Total Metals by ICP-AES</b>                              |            |      |       |                  |                   |                   |                   |                   |                   |
| Barium                                                              | 7440-39-3  | 10   | mg/kg |                  | 20                | ----              | ----              | ----              | 140               |
| Beryllium                                                           | 7440-41-7  | 1    | mg/kg |                  | <1                | ----              | ----              | ----              | <1                |
| Boron                                                               | 7440-42-8  | 50   | mg/kg |                  | <50               | ----              | ----              | ----              | <50               |
| Cobalt                                                              | 7440-48-4  | 2    | mg/kg |                  | <2                | ----              | ----              | ----              | 20                |
| Manganese                                                           | 7439-96-5  | 5    | mg/kg |                  | 22                | ----              | ----              | ----              | 458               |
| Selenium                                                            | 7782-49-2  | 5    | mg/kg |                  | <5                | ----              | ----              | ----              | <5                |
| Vanadium                                                            | 7440-62-2  | 5    | mg/kg |                  | <5                | ----              | ----              | ----              | 35                |
| Arsenic                                                             | 7440-38-2  | 5    | mg/kg |                  | <5                | <5                | <5                | <5                | 5                 |
| Cadmium                                                             | 7440-43-9  | 1    | mg/kg |                  | <1                | <1                | <1                | 3                 | 2                 |
| Chromium                                                            | 7440-47-3  | 2    | mg/kg |                  | 3                 | 3                 | 51                | 31                | 50                |
| Copper                                                              | 7440-50-8  | 5    | mg/kg |                  | <5                | <5                | 41                | 50                | 169               |
| Lead                                                                | 7439-92-1  | 5    | mg/kg |                  | 6                 | <5                | <5                | 134               | 233               |
| Nickel                                                              | 7440-02-0  | 2    | mg/kg |                  | 2                 | <2                | 72                | 34                | 53                |
| Zinc                                                                | 7440-66-6  | 5    | mg/kg |                  | 28                | 6                 | 65                | 524               | 418               |
| <b>EG035T: Total Recoverable Mercury by FIMS</b>                    |            |      |       |                  |                   |                   |                   |                   |                   |
| Mercury                                                             | 7439-97-6  | 0.1  | mg/kg |                  | <0.1              | <0.1              | <0.1              | <0.1              | <0.1              |
| <b>EG048: Hexavalent Chromium (Alkaline Digest)</b>                 |            |      |       |                  |                   |                   |                   |                   |                   |
| Hexavalent Chromium                                                 | 18540-29-9 | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | ----              | <0.5              |
| <b>EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser</b> |            |      |       |                  |                   |                   |                   |                   |                   |
| Weak Acid Dissociable Cyanide                                       | ----       | 1    | mg/kg |                  | <1                | ----              | ----              | ----              | <1                |
| <b>EP066: Polychlorinated Biphenyls (PCB)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| Total Polychlorinated biphenyls                                     | ----       | 0.1  | mg/kg |                  | <0.1              | ----              | ----              | ----              | <0.4              |
| <b>EP068A: Organochlorine Pesticides (OC)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| alpha-BHC                                                           | 319-84-6   | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| Hexachlorobenzene (HCB)                                             | 118-74-1   | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| beta-BHC                                                            | 319-85-7   | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| gamma-BHC                                                           | 58-89-9    | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| delta-BHC                                                           | 319-86-8   | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| Heptachlor                                                          | 76-44-8    | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| Aldrin                                                              | 309-00-2   | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| Heptachlor epoxide                                                  | 1024-57-3  | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| ^ Total Chlordane (sum)                                             | ----       | 0.05 | mg/kg |                  | ----              | ----              | <0.05             | ----              | ----              |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                             |            |     |      | SS06-120918_035   | SS07-120918_035   | SS08-120918_039   | SS09-120918_039   | SS10-120918_039   |
|-----------------------------|------------|-----|------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time |            |     |      | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                    | CAS Number | LOR | Unit | EM1814874-006     | EM1814874-007     | EM1814874-008     | EM1814874-009     | EM1814874-010     |
|                             |            |     |      | Result            | Result            | Result            | Result            | Result            |

### EP068A: Organochlorine Pesticides (OC) - Continued

|                            |                      |      |       |       |      |       |      |       |
|----------------------------|----------------------|------|-------|-------|------|-------|------|-------|
| trans-Chlordane            | 5103-74-2            | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| alpha-Endosulfan           | 959-98-8             | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| cis-Chlordane              | 5103-71-9            | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Dieldrin                   | 60-57-1              | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| 4,4'-DDE                   | 72-55-9              | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Endrin                     | 72-20-8              | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| beta-Endosulfan            | 33213-65-9           | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| ^ Endosulfan (sum)         | 115-29-7             | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| 4,4'-DDD                   | 72-54-8              | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Endrin aldehyde            | 7421-93-4            | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Endosulfan sulfate         | 1031-07-8            | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| 4,4'-DDT                   | 50-29-3              | 0.2  | mg/kg | <0.2  | ---- | <0.2  | ---- | <0.2  |
| Endrin ketone              | 53494-70-5           | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Methoxychlor               | 72-43-5              | 0.2  | mg/kg | <0.2  | ---- | <0.2  | ---- | <0.2  |
| Mirex                      | 2385-85-5            | 0.20 | mg/kg | <0.20 | ---- | ----  | ---- | <0.20 |
| ^ Sum of Aldrin + Dieldrin | 309-00-2/60-57-1     | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| ^ Sum of DDD + DDE + DDT   | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |

### EP068B: Organophosphorus Pesticides (OP)

|                     |            |      |       |       |      |       |      |       |
|---------------------|------------|------|-------|-------|------|-------|------|-------|
| Dichlorvos          | 62-73-7    | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Demeton-S-methyl    | 919-86-8   | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Monocrotophos       | 6923-22-4  | 0.2  | mg/kg | <0.2  | ---- | <0.2  | ---- | <0.2  |
| Dimethoate          | 60-51-5    | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Diazinon            | 333-41-5   | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Chlorpyrifos-methyl | 5598-13-0  | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Parathion-methyl    | 298-00-0   | 0.2  | mg/kg | <0.2  | ---- | <0.2  | ---- | <0.2  |
| Malathion           | 121-75-5   | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Fenthion            | 55-38-9    | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Chlorpyrifos        | 2921-88-2  | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Parathion           | 56-38-2    | 0.2  | mg/kg | <0.2  | ---- | <0.2  | ---- | <0.2  |
| Pirimphos-ethyl     | 23505-41-1 | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Chlorfenvinphos     | 470-90-6   | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Bromophos-ethyl     | 4824-78-6  | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Fenamiphos          | 22224-92-6 | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |
| Prothiofos          | 34643-46-4 | 0.05 | mg/kg | <0.05 | ---- | <0.05 | ---- | <0.20 |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                          |                   |      |       | Client sample ID | SS06-120918_035   | SS07-120918_035   | SS08-120918_039   | SS09-120918_039   | SS10-120918_039   |
|-------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                    | CAS Number        | LOR  | Unit  |                  | EM1814874-006     | EM1814874-007     | EM1814874-008     | EM1814874-009     | EM1814874-010     |
|                                                             |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg |                  | <0.05             | ----              | <0.05             | ----              | <0.20             |
| <b>EP068C: Triazines</b>                                    |                   |      |       |                  |                   |                   |                   |                   |                   |
| Atrazine                                                    | 1912-24-9         | 0.05 | mg/kg |                  | <0.05             | ----              | ----              | ----              | <0.20             |
| <b>EP068D: Pyrethroids</b>                                  |                   |      |       |                  |                   |                   |                   |                   |                   |
| Bifenthrin                                                  | 82657-04-3        | 0.05 | mg/kg |                  | <0.05             | ----              | ----              | ----              | <0.20             |
| <b>EP075(SIM)A: Phenolic Compounds</b>                      |                   |      |       |                  |                   |                   |                   |                   |                   |
| Phenol                                                      | 108-95-2          | 0.5  | mg/kg |                  | 2.3               | <0.5              | ----              | ----              | <0.5              |
| 2-Chlorophenol                                              | 95-57-8           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 2-Methylphenol                                              | 95-48-7           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 3- & 4-Methylphenol                                         | 1319-77-3         | 1    | mg/kg |                  | <1                | <1                | ----              | ----              | <1                |
| 2-Nitrophenol                                               | 88-75-5           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 2,4-Dimethylphenol                                          | 105-67-9          | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 2,4-Dichlorophenol                                          | 120-83-2          | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 2,6-Dichlorophenol                                          | 87-65-0           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 4-Chloro-3-methylphenol                                     | 59-50-7           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 2,4,6-Trichlorophenol                                       | 88-06-2           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| 2,4,5-Trichlorophenol                                       | 95-95-4           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | ----              | <0.5              |
| Pentachlorophenol                                           | 87-86-5           | 2    | mg/kg |                  | <2                | <2                | ----              | ----              | <2                |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>       |                   |      |       |                  |                   |                   |                   |                   |                   |
| Naphthalene                                                 | 91-20-3           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | 0.8               |
| Acenaphthylene                                              | 208-96-8          | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | <0.5              |
| Acenaphthene                                                | 83-32-9           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | <0.5              |
| Fluorene                                                    | 86-73-7           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | <0.5              |
| Phenanthrene                                                | 85-01-8           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | 2.8               |
| Anthracene                                                  | 120-12-7          | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | <0.5              |
| Fluoranthene                                                | 206-44-0          | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | 0.6               |
| Pyrene                                                      | 129-00-0          | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | 3.0               |
| Benz(a)anthracene                                           | 56-55-3           | 0.5  | mg/kg |                  | <0.5              | <0.5              | ----              | <0.5              | <0.5              |
| Chrysene                                                    | 218-01-9          | 0.5  | mg/kg |                  | <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              |
| Benzo(k)fluoranthene                                        | 207-08-9          | 0.5  | mg/kg |                  | <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              |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                     |                   |     |       | Client sample ID | SS06-120918_035   | SS07-120918_035   | SS08-120918_039   | SS09-120918_039   | SS10-120918_039   |
|------------------------------------------------------------------------|-------------------|-----|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                   |     |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                               | CAS Number        | LOR | Unit  |                  | EM1814874-006     | EM1814874-007     | EM1814874-008     | EM1814874-009     | EM1814874-010     |
|                                                                        |                   |     |       | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>      |                   |     |       |                  |                   |                   |                   |                   |                   |
| 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              | 2.5               |
| ^ Sum of polycyclic aromatic hydrocarbons                              | ----              | 0.5 | mg/kg | <0.5             | <0.5              | ----              | <0.5              | <0.5              | 9.7               |
| ^ 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               |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----              | 10  | mg/kg | <10              | <10               | <10               | <10               | <10               | <10               |
| C10 - C14 Fraction                                                     | ----              | 50  | mg/kg | <50              | <50               | 50                | <50               | <50               | 1920              |
| C15 - C28 Fraction                                                     | ----              | 100 | mg/kg | 140              | <100              | 540               | 5010              | 19300             | 19300             |
| C29 - C36 Fraction                                                     | ----              | 100 | mg/kg | 140              | <100              | <100              | 4930              | 14000             | 14000             |
| ^ C10 - C36 Fraction (sum)                                             | ----              | 50  | mg/kg | 280              | <50               | 590               | 9940              | 35200             | 35200             |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10            | 10  | mg/kg | <10              | <10               | <10               | <10               | <10               | <10               |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX       | 10  | mg/kg | <10              | <10               | <10               | <10               | <10               | <10               |
| >C10 - C16 Fraction                                                    | ----              | 50  | mg/kg | <50              | <50               | 130               | 50                | 3350              | 3350              |
| >C16 - C34 Fraction                                                    | ----              | 100 | mg/kg | 230              | <100              | 480               | 8920              | 29000             | 29000             |
| >C34 - C40 Fraction                                                    | ----              | 100 | mg/kg | <100             | <100              | <100              | 2050              | 5390              | 5390              |
| ^ >C10 - C40 Fraction (sum)                                            | ----              | 50  | mg/kg | 230              | <50               | 610               | 11000             | 37700             | 37700             |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                           | ----              | 50  | mg/kg | <50              | <50               | 130               | 50                | 3350              | 3350              |
| <b>EP080: BTEXN</b>                                                    |                   |     |       |                  |                   |                   |                   |                   |                   |
| Benzene                                                                | 71-43-2           | 0.2 | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Toluene                                                                | 108-88-3          | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | 1.5               |
| Ethylbenzene                                                           | 100-41-4          | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| meta- & para-Xylene                                                    | 108-38-3 106-42-3 | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ortho-Xylene                                                           | 95-47-6           | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ^ Sum of BTEX                                                          | ----              | 0.2 | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | 1.5               |
| ^ Total Xylenes                                                        | ----              | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| Naphthalene                                                            | 91-20-3           | 1   | mg/kg | <1               | <1                | <1                | <1                | <1                | <1                |
| <b>EP066S: PCB Surrogate</b>                                           |                   |     |       |                  |                   |                   |                   |                   |                   |
| Decachlorobiphenyl                                                     | 2051-24-3         | 0.1 | %     | 89.7             | ----              | ----              | ----              | ----              | 128               |



## Analytical Results

|                                                     |            |      |      |                  |                   |                   |                   |                   |                   |
|-----------------------------------------------------|------------|------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)                  |            |      |      | Client sample ID | SS06-120918_035   | SS07-120918_035   | SS08-120918_039   | SS09-120918_039   | SS10-120918_039   |
| Client sampling date / time                         |            |      |      |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                            | CAS Number | LOR  | Unit |                  | EM1814874-006     | EM1814874-007     | EM1814874-008     | EM1814874-009     | EM1814874-010     |
|                                                     |            |      |      | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |            |      |      |                  |                   |                   |                   |                   |                   |
| Dibromo-DDE                                         | 21655-73-2 | 0.05 | %    |                  | 113               | ----              | 105               | ----              | 118               |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |            |      |      |                  |                   |                   |                   |                   |                   |
| DEF                                                 | 78-48-8    | 0.05 | %    |                  | 95.7              | ----              | 103               | ----              | 90.3              |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |            |      |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                           | 13127-88-3 | 0.5  | %    |                  | 88.8              | 90.1              | ----              | 86.1              | 111               |
| 2-Chlorophenol-D4                                   | 93951-73-6 | 0.5  | %    |                  | 98.1              | 99.9              | ----              | 96.1              | 108               |
| 2,4,6-Tribromophenol                                | 118-79-6   | 0.5  | %    |                  | 86.6              | 88.6              | ----              | 85.2              | 106               |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |            |      |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                    | 321-60-8   | 0.5  | %    |                  | 95.8              | 98.5              | ----              | 94.8              | 111               |
| Anthracene-d10                                      | 1719-06-8  | 0.5  | %    |                  | 97.8              | 101               | ----              | 95.4              | 122               |
| 4-Terphenyl-d14                                     | 1718-51-0  | 0.5  | %    |                  | 92.6              | 96.6              | ----              | 87.9              | 124               |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |            |      |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                               | 17060-07-0 | 0.2  | %    |                  | 79.7              | 79.0              | 71.8              | 72.3              | 57.1              |
| Toluene-D8                                          | 2037-26-5  | 0.2  | %    |                  | 71.1              | 75.0              | 66.8              | 68.9              | 56.4              |
| 4-Bromofluorobenzene                                | 460-00-4   | 0.2  | %    |                  | 86.5              | 80.2              | 79.8              | 76.4              | 63.0              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                  |            |      |       | Client sample ID | SS11-120918_040   | SS12-120918_040   | SS13-120918_040   | SS14-120918_040   | SS15-120918_040   |
|---------------------------------------------------------------------|------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                         |            |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                            | CAS Number | LOR  | Unit  |                  | EM1814874-011     | EM1814874-012     | EM1814874-013     | EM1814874-014     | EM1814874-015     |
|                                                                     |            |      |       | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EA055: Moisture Content (Dried @ 105-110°C)</b>                  |            |      |       |                  |                   |                   |                   |                   |                   |
| Moisture Content                                                    | ----       | 1.0  | %     |                  | 29.5              | 32.5              | 31.3              | 33.9              | 30.6              |
| <b>EG005T: Total Metals by ICP-AES</b>                              |            |      |       |                  |                   |                   |                   |                   |                   |
| Barium                                                              | 7440-39-3  | 10   | mg/kg | ----             | 40                | ----              | ----              | ----              | ----              |
| Beryllium                                                           | 7440-41-7  | 1    | mg/kg | ----             | <1                | ----              | ----              | ----              | ----              |
| Boron                                                               | 7440-42-8  | 50   | mg/kg | ----             | <50               | ----              | ----              | ----              | ----              |
| Cobalt                                                              | 7440-48-4  | 2    | mg/kg | ----             | 4                 | ----              | ----              | ----              | ----              |
| Manganese                                                           | 7439-96-5  | 5    | mg/kg | ----             | 53                | ----              | ----              | ----              | ----              |
| Selenium                                                            | 7782-49-2  | 5    | mg/kg | ----             | <5                | ----              | ----              | ----              | ----              |
| Vanadium                                                            | 7440-62-2  | 5    | mg/kg | ----             | 20                | ----              | ----              | ----              | ----              |
| Arsenic                                                             | 7440-38-2  | 5    | mg/kg | <5               | <5                | <5                | <5                | <5                | <5                |
| Cadmium                                                             | 7440-43-9  | 1    | mg/kg | <1               | <1                | <1                | <1                | <1                | <1                |
| Chromium                                                            | 7440-47-3  | 2    | mg/kg | 8                | 9                 | 13                | 10                | 5                 |                   |
| Copper                                                              | 7440-50-8  | 5    | mg/kg | 10               | 6                 | 5                 | 8                 | <5                |                   |
| Lead                                                                | 7439-92-1  | 5    | mg/kg | 12               | 10                | 11                | 12                | 8                 |                   |
| Nickel                                                              | 7440-02-0  | 2    | mg/kg | 2                | 4                 | 3                 | 2                 | <2                |                   |
| Zinc                                                                | 7440-66-6  | 5    | mg/kg | 13               | 22                | 15                | 12                | 7                 |                   |
| <b>EG035T: Total Recoverable Mercury by FIMS</b>                    |            |      |       |                  |                   |                   |                   |                   |                   |
| Mercury                                                             | 7439-97-6  | 0.1  | mg/kg | <0.1             | <0.1              | <0.1              | <0.1              | <0.1              | <0.1              |
| <b>EG048: Hexavalent Chromium (Alkaline Digest)</b>                 |            |      |       |                  |                   |                   |                   |                   |                   |
| Hexavalent Chromium                                                 | 18540-29-9 | 0.5  | mg/kg | ----             | <0.5              | ----              | ----              | ----              | ----              |
| <b>EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser</b> |            |      |       |                  |                   |                   |                   |                   |                   |
| Weak Acid Dissociable Cyanide                                       | ----       | 1    | mg/kg | ----             | <1                | ----              | ----              | ----              | ----              |
| <b>EP066: Polychlorinated Biphenyls (PCB)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| Total Polychlorinated biphenyls                                     | ----       | 0.1  | mg/kg | ----             | <0.1              | ----              | ----              | ----              | ----              |
| <b>EP068A: Organochlorine Pesticides (OC)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| alpha-BHC                                                           | 319-84-6   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Hexachlorobenzene (HCB)                                             | 118-74-1   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| beta-BHC                                                            | 319-85-7   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| gamma-BHC                                                           | 58-89-9    | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| delta-BHC                                                           | 319-86-8   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Heptachlor                                                          | 76-44-8    | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Aldrin                                                              | 309-00-2   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Heptachlor epoxide                                                  | 1024-57-3  | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| ^ Total Chlordane (sum)                                             | ----       | 0.05 | mg/kg | <0.05            | ----              | <0.05             | <0.05             | <0.05             | <0.05             |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                        |                      |      |       | Client sample ID | SS11-120918_040   | SS12-120918_040   | SS13-120918_040   | SS14-120918_040   | SS15-120918_040   |
|-----------------------------------------------------------|----------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |                      |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                  | CAS Number           | LOR  | Unit  |                  | EM1814874-011     | EM1814874-012     | EM1814874-013     | EM1814874-014     | EM1814874-015     |
|                                                           |                      |      |       | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP068A: Organochlorine Pesticides (OC) - Continued</b> |                      |      |       |                  |                   |                   |                   |                   |                   |
| trans-Chlordane                                           | 5103-74-2            | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| alpha-Endosulfan                                          | 959-98-8             | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| cis-Chlordane                                             | 5103-71-9            | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Dieldrin                                                  | 60-57-1              | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| 4,4'-DDE                                                  | 72-55-9              | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Endrin                                                    | 72-20-8              | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| beta-Endosulfan                                           | 33213-65-9           | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| ^ Endosulfan (sum)                                        | 115-29-7             | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| 4,4'-DDD                                                  | 72-54-8              | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Endrin aldehyde                                           | 7421-93-4            | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Endosulfan sulfate                                        | 1031-07-8            | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| 4,4'-DDT                                                  | 50-29-3              | 0.2  | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Endrin ketone                                             | 53494-70-5           | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Methoxychlor                                              | 72-43-5              | 0.2  | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Mirex                                                     | 2385-85-5            | 0.20 | mg/kg | ----             | <0.20             | ----              | ----              | ----              | ----              |
| ^ Sum of Aldrin + Dieldrin                                | 309-00-2/60-57-1     | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| ^ Sum of DDD + DDE + DDT                                  | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| <b>EP068B: Organophosphorus Pesticides (OP)</b>           |                      |      |       |                  |                   |                   |                   |                   |                   |
| Dichlorvos                                                | 62-73-7              | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Demeton-S-methyl                                          | 919-86-8             | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Monocrotophos                                             | 6923-22-4            | 0.2  | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Dimethoate                                                | 60-51-5              | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Diazinon                                                  | 333-41-5             | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Chlorpyrifos-methyl                                       | 5598-13-0            | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Parathion-methyl                                          | 298-00-0             | 0.2  | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Malathion                                                 | 121-75-5             | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Fenthion                                                  | 55-38-9              | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Chlorpyrifos                                              | 2921-88-2            | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Parathion                                                 | 56-38-2              | 0.2  | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Pirimphos-ethyl                                           | 23505-41-1           | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Chlorfenvinphos                                           | 470-90-6             | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Bromophos-ethyl                                           | 4824-78-6            | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Fenamiphos                                                | 22224-92-6           | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Prothiofos                                                | 34643-46-4           | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                          |                   |      |       | Client sample ID | SS11-120918_040   | SS12-120918_040   | SS13-120918_040   | SS14-120918_040   | SS15-120918_040   |
|-------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                    | CAS Number        | LOR  | Unit  |                  | EM1814874-011     | EM1814874-012     | EM1814874-013     | EM1814874-014     | EM1814874-015     |
|                                                             |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| <b>EP068C: Triazines</b>                                    |                   |      |       |                  |                   |                   |                   |                   |                   |
| Atrazine                                                    | 1912-24-9         | 0.05 | mg/kg |                  | ----              | <0.05             | ----              | ----              | ----              |
| <b>EP068D: Pyrethroids</b>                                  |                   |      |       |                  |                   |                   |                   |                   |                   |
| Bifenthrin                                                  | 82657-04-3        | 0.05 | mg/kg |                  | ----              | <0.05             | ----              | ----              | ----              |
| <b>EP075(SIM)A: Phenolic Compounds</b>                      |                   |      |       |                  |                   |                   |                   |                   |                   |
| Phenol                                                      | 108-95-2          | 0.5  | mg/kg |                  | ----              | 0.5               | ----              | ----              | ----              |
| 2-Chlorophenol                                              | 95-57-8           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 2-Methylphenol                                              | 95-48-7           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 3- & 4-Methylphenol                                         | 1319-77-3         | 1    | mg/kg |                  | ----              | <1                | ----              | ----              | ----              |
| 2-Nitrophenol                                               | 88-75-5           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 2,4-Dimethylphenol                                          | 105-67-9          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 2,4-Dichlorophenol                                          | 120-83-2          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 2,6-Dichlorophenol                                          | 87-65-0           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 4-Chloro-3-methylphenol                                     | 59-50-7           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 2,4,6-Trichlorophenol                                       | 88-06-2           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| 2,4,5-Trichlorophenol                                       | 95-95-4           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Pentachlorophenol                                           | 87-86-5           | 2    | mg/kg |                  | ----              | <2                | ----              | ----              | ----              |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>       |                   |      |       |                  |                   |                   |                   |                   |                   |
| Naphthalene                                                 | 91-20-3           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Acenaphthylene                                              | 208-96-8          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Acenaphthene                                                | 83-32-9           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Fluorene                                                    | 86-73-7           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Phenanthrene                                                | 85-01-8           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Anthracene                                                  | 120-12-7          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Fluoranthene                                                | 206-44-0          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Pyrene                                                      | 129-00-0          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Benz(a)anthracene                                           | 56-55-3           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Chrysene                                                    | 218-01-9          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Benzo(b+j)fluoranthene                                      | 205-99-2 205-82-3 | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Benzo(k)fluoranthene                                        | 207-08-9          | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |
| Benzo(a)pyrene                                              | 50-32-8           | 0.5  | mg/kg |                  | ----              | <0.5              | ----              | ----              | ----              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                     |                   |     |       | Client sample ID | SS11-120918_040   | SS12-120918_040   | SS13-120918_040   | SS14-120918_040   | SS15-120918_040   |
|------------------------------------------------------------------------|-------------------|-----|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                   |     |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                                               | CAS Number        | LOR | Unit  |                  | EM1814874-011     | EM1814874-012     | EM1814874-013     | EM1814874-014     | EM1814874-015     |
|                                                                        |                   |     |       | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>      |                   |     |       |                  |                   |                   |                   |                   |                   |
| Indeno(1.2.3.cd)pyrene                                                 | 193-39-5          | 0.5 | mg/kg | ----             | <0.5              | ----              | ----              | ----              | ----              |
| Dibenz(a,h)anthracene                                                  | 53-70-3           | 0.5 | mg/kg | ----             | <0.5              | ----              | ----              | ----              | ----              |
| Benzo(g,h,i)perylene                                                   | 191-24-2          | 0.5 | mg/kg | ----             | <0.5              | ----              | ----              | ----              | ----              |
| ^ Sum of polycyclic aromatic hydrocarbons                              | ----              | 0.5 | mg/kg | ----             | <0.5              | ----              | ----              | ----              | ----              |
| ^ Benzo(a)pyrene TEQ (zero)                                            | ----              | 0.5 | mg/kg | ----             | <0.5              | ----              | ----              | ----              | ----              |
| ^ Benzo(a)pyrene TEQ (half LOR)                                        | ----              | 0.5 | mg/kg | ----             | 0.6               | ----              | ----              | ----              | ----              |
| ^ Benzo(a)pyrene TEQ (LOR)                                             | ----              | 0.5 | mg/kg | ----             | 1.2               | ----              | ----              | ----              | ----              |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----              | 10  | mg/kg | <10              | <10               | <10               | <10               | <10               | <10               |
| C10 - C14 Fraction                                                     | ----              | 50  | mg/kg | <50              | <50               | <50               | <50               | <50               | <50               |
| C15 - C28 Fraction                                                     | ----              | 100 | mg/kg | <100             | <100              | <100              | 140               | <100              | <100              |
| C29 - C36 Fraction                                                     | ----              | 100 | mg/kg | 100              | <100              | <100              | 150               | 130               | 130               |
| ^ C10 - C36 Fraction (sum)                                             | ----              | 50  | mg/kg | 100              | <50               | <50               | 290               | 130               | 130               |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10            | 10  | mg/kg | <10              | <10               | <10               | <10               | <10               | <10               |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX       | 10  | mg/kg | <10              | <10               | <10               | <10               | <10               | <10               |
| >C10 - C16 Fraction                                                    | ----              | 50  | mg/kg | <50              | <50               | <50               | <50               | <50               | <50               |
| >C16 - C34 Fraction                                                    | ----              | 100 | mg/kg | 160              | 110               | <100              | 230               | 180               | 180               |
| >C34 - C40 Fraction                                                    | ----              | 100 | mg/kg | <100             | <100              | <100              | <100              | <100              | <100              |
| ^ >C10 - C40 Fraction (sum)                                            | ----              | 50  | mg/kg | 160              | 110               | <50               | 230               | 180               | 180               |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                           | ----              | 50  | mg/kg | <50              | <50               | <50               | <50               | <50               | <50               |
| <b>EP080: BTEXN</b>                                                    |                   |     |       |                  |                   |                   |                   |                   |                   |
| Benzene                                                                | 71-43-2           | 0.2 | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Toluene                                                                | 108-88-3          | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| Ethylbenzene                                                           | 100-41-4          | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| meta- & para-Xylene                                                    | 108-38-3 106-42-3 | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ortho-Xylene                                                           | 95-47-6           | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ^ Sum of BTEX                                                          | ----              | 0.2 | mg/kg | <0.2             | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| ^ Total Xylenes                                                        | ----              | 0.5 | mg/kg | <0.5             | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| Naphthalene                                                            | 91-20-3           | 1   | mg/kg | <1               | <1                | <1                | <1                | <1                | <1                |
| <b>EP066S: PCB Surrogate</b>                                           |                   |     |       |                  |                   |                   |                   |                   |                   |
| Decachlorobiphenyl                                                     | 2051-24-3         | 0.1 | %     | ----             | 109               | ----              | ----              | ----              | ----              |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                  |            |      |      | Client sample ID | SS11-120918_040   | SS12-120918_040   | SS13-120918_040   | SS14-120918_040   | SS15-120918_040   |
|-----------------------------------------------------|------------|------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                         |            |      |      |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 |
| Compound                                            | CAS Number | LOR  | Unit |                  | EM1814874-011     | EM1814874-012     | EM1814874-013     | EM1814874-014     | EM1814874-015     |
|                                                     |            |      |      | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |            |      |      |                  |                   |                   |                   |                   |                   |
| Dibromo-DDE                                         | 21655-73-2 | 0.05 | %    |                  | 100               | 106               | 115               | 113               | 111               |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |            |      |      |                  |                   |                   |                   |                   |                   |
| DEF                                                 | 78-48-8    | 0.05 | %    |                  | 101               | 96.0              | 98.0              | 91.4              | 93.7              |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |            |      |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                           | 13127-88-3 | 0.5  | %    |                  | ----              | 86.9              | ----              | ----              | ----              |
| 2-Chlorophenol-D4                                   | 93951-73-6 | 0.5  | %    |                  | ----              | 98.8              | ----              | ----              | ----              |
| 2,4,6-Tribromophenol                                | 118-79-6   | 0.5  | %    |                  | ----              | 93.0              | ----              | ----              | ----              |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |            |      |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                    | 321-60-8   | 0.5  | %    |                  | ----              | 100               | ----              | ----              | ----              |
| Anthracene-d10                                      | 1719-06-8  | 0.5  | %    |                  | ----              | 103               | ----              | ----              | ----              |
| 4-Terphenyl-d14                                     | 1718-51-0  | 0.5  | %    |                  | ----              | 97.6              | ----              | ----              | ----              |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |            |      |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                               | 17060-07-0 | 0.2  | %    |                  | 72.2              | 71.8              | 53.4              | 64.4              | 61.0              |
| Toluene-D8                                          | 2037-26-5  | 0.2  | %    |                  | 66.9              | 71.5              | 55.2              | 58.2              | 57.8              |
| 4-Bromofluorobenzene                                | 460-00-4   | 0.2  | %    |                  | 76.8              | 79.7              | 69.7              | 72.5              | 71.0              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                  |            |      |       | Client sample ID | SS16-120918_040   | SS17-120918_040   | SS18-120918_040   | SS19-130918_036   | SS20-130918_036   |
|---------------------------------------------------------------------|------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                         |            |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                                            | CAS Number | LOR  | Unit  |                  | EM1814874-016     | EM1814874-017     | EM1814874-018     | EM1814874-019     | EM1814874-020     |
|                                                                     |            |      |       | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EA055: Moisture Content (Dried @ 105-110°C)</b>                  |            |      |       |                  |                   |                   |                   |                   |                   |
| Moisture Content                                                    | ----       | 1.0  | %     |                  | 35.0              | 32.9              | 29.6              | 26.2              | 4.5               |
| <b>EG005T: Total Metals by ICP-AES</b>                              |            |      |       |                  |                   |                   |                   |                   |                   |
| Barium                                                              | 7440-39-3  | 10   | mg/kg |                  | 80                | ----              | ----              | 20                | ----              |
| Beryllium                                                           | 7440-41-7  | 1    | mg/kg |                  | <1                | ----              | ----              | <1                | ----              |
| Boron                                                               | 7440-42-8  | 50   | mg/kg |                  | <50               | ----              | ----              | <50               | ----              |
| Cobalt                                                              | 7440-48-4  | 2    | mg/kg |                  | 17                | ----              | ----              | <2                | ----              |
| Manganese                                                           | 7439-96-5  | 5    | mg/kg |                  | 302               | ----              | ----              | 67                | ----              |
| Selenium                                                            | 7782-49-2  | 5    | mg/kg |                  | <5                | ----              | ----              | <5                | ----              |
| Vanadium                                                            | 7440-62-2  | 5    | mg/kg |                  | 31                | ----              | ----              | 10                | ----              |
| Arsenic                                                             | 7440-38-2  | 5    | mg/kg |                  | <5                | <5                | <5                | <5                | <5                |
| Cadmium                                                             | 7440-43-9  | 1    | mg/kg |                  | <1                | <1                | <1                | <1                | <1                |
| Chromium                                                            | 7440-47-3  | 2    | mg/kg |                  | 20                | 7                 | 10                | 5                 | 34                |
| Copper                                                              | 7440-50-8  | 5    | mg/kg |                  | 16                | 6                 | 6                 | <5                | 44                |
| Lead                                                                | 7439-92-1  | 5    | mg/kg |                  | 10                | 10                | 11                | 6                 | <5                |
| Nickel                                                              | 7440-02-0  | 2    | mg/kg |                  | 18                | 3                 | 2                 | 4                 | 85                |
| Zinc                                                                | 7440-66-6  | 5    | mg/kg |                  | 59                | 9                 | 10                | 14                | 143               |
| <b>EG035T: Total Recoverable Mercury by FIMS</b>                    |            |      |       |                  |                   |                   |                   |                   |                   |
| Mercury                                                             | 7439-97-6  | 0.1  | mg/kg |                  | <0.1              | <0.1              | <0.1              | <0.1              | <0.1              |
| <b>EG048: Hexavalent Chromium (Alkaline Digest)</b>                 |            |      |       |                  |                   |                   |                   |                   |                   |
| Hexavalent Chromium                                                 | 18540-29-9 | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| <b>EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser</b> |            |      |       |                  |                   |                   |                   |                   |                   |
| Weak Acid Dissociable Cyanide                                       | ----       | 1    | mg/kg |                  | <1                | ----              | ----              | 1                 | ----              |
| <b>EP066: Polychlorinated Biphenyls (PCB)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| Total Polychlorinated biphenyls                                     | ----       | 0.1  | mg/kg |                  | <0.1              | ----              | ----              | <0.1              | ----              |
| <b>EP068A: Organochlorine Pesticides (OC)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| alpha-BHC                                                           | 319-84-6   | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Hexachlorobenzene (HCB)                                             | 118-74-1   | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| beta-BHC                                                            | 319-85-7   | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| gamma-BHC                                                           | 58-89-9    | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| delta-BHC                                                           | 319-86-8   | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Heptachlor                                                          | 76-44-8    | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Aldrin                                                              | 309-00-2   | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Heptachlor epoxide                                                  | 1024-57-3  | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| ^ Total Chlordane (sum)                                             | ----       | 0.05 | mg/kg |                  | ----              | <0.05             | <0.05             | ----              | <0.05             |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

| Client sampling date / time |  |  |  | SS16-120918_040   | SS17-120918_040   | SS18-120918_040   | SS19-130918_036   | SS20-130918_036   |
|-----------------------------|--|--|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| Compound                    |  |  |  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| CAS Number LOR Unit         |  |  |  | EM1814874-016     | EM1814874-017     | EM1814874-018     | EM1814874-019     | EM1814874-020     |
|                             |  |  |  | Result            | Result            | Result            | Result            | Result            |

### EP068A: Organochlorine Pesticides (OC) - Continued

|                            |                      |      |       |       |       |       |       |       |
|----------------------------|----------------------|------|-------|-------|-------|-------|-------|-------|
| trans-Chlordane            | 5103-74-2            | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| alpha-Endosulfan           | 959-98-8             | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| cis-Chlordane              | 5103-71-9            | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Dieldrin                   | 60-57-1              | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 4,4'-DDE                   | 72-55-9              | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Endrin                     | 72-20-8              | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| beta-Endosulfan            | 33213-65-9           | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| ^ Endosulfan (sum)         | 115-29-7             | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 4,4'-DDD                   | 72-54-8              | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Endrin aldehyde            | 7421-93-4            | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Endosulfan sulfate         | 1031-07-8            | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| 4,4'-DDT                   | 50-29-3              | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  |
| Endrin ketone              | 53494-70-5           | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Methoxychlor               | 72-43-5              | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  |
| Mirex                      | 2385-85-5            | 0.20 | mg/kg | <0.20 | ----  | ----  | <0.20 | ----  |
| ^ Sum of Aldrin + Dieldrin | 309-00-2/60-57-1     | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| ^ Sum of DDD + DDE + DDT   | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |

### EP068B: Organophosphorus Pesticides (OP)

|                     |            |      |       |       |       |       |       |       |
|---------------------|------------|------|-------|-------|-------|-------|-------|-------|
| Dichlorvos          | 62-73-7    | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Demeton-S-methyl    | 919-86-8   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Monocrotophos       | 6923-22-4  | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  |
| Dimethoate          | 60-51-5    | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Diazinon            | 333-41-5   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Chlorpyrifos-methyl | 5598-13-0  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Parathion-methyl    | 298-00-0   | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  |
| Malathion           | 121-75-5   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Fenthion            | 55-38-9    | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Chlorpyrifos        | 2921-88-2  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Parathion           | 56-38-2    | 0.2  | mg/kg | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  |
| Pirimphos-ethyl     | 23505-41-1 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Chlorfenvinphos     | 470-90-6   | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Bromophos-ethyl     | 4824-78-6  | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Fenamiphos          | 22224-92-6 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Prothiofos          | 34643-46-4 | 0.05 | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                          |                   |      |       | Client sample ID | SS16-120918_040   | SS17-120918_040   | SS18-120918_040   | SS19-130918_036   | SS20-130918_036   |
|-------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                                    | CAS Number        | LOR  | Unit  |                  | EM1814874-016     | EM1814874-017     | EM1814874-018     | EM1814874-019     | EM1814874-020     |
|                                                             |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| <b>EP068C: Triazines</b>                                    |                   |      |       |                  |                   |                   |                   |                   |                   |
| Atrazine                                                    | 1912-24-9         | 0.05 | mg/kg |                  | <0.05             | ----              | ----              | <0.05             | ----              |
| <b>EP068D: Pyrethroids</b>                                  |                   |      |       |                  |                   |                   |                   |                   |                   |
| Bifenthrin                                                  | 82657-04-3        | 0.05 | mg/kg |                  | <0.05             | ----              | ----              | <0.05             | ----              |
| <b>EP075(SIM)A: Phenolic Compounds</b>                      |                   |      |       |                  |                   |                   |                   |                   |                   |
| Phenol                                                      | 108-95-2          | 0.5  | mg/kg |                  | 1.3               | ----              | ----              | 0.6               | ----              |
| 2-Chlorophenol                                              | 95-57-8           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 2-Methylphenol                                              | 95-48-7           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 3- & 4-Methylphenol                                         | 1319-77-3         | 1    | mg/kg |                  | <1                | ----              | ----              | <1                | ----              |
| 2-Nitrophenol                                               | 88-75-5           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 2,4-Dimethylphenol                                          | 105-67-9          | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 2,4-Dichlorophenol                                          | 120-83-2          | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 2,6-Dichlorophenol                                          | 87-65-0           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 4-Chloro-3-methylphenol                                     | 59-50-7           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 2,4,6-Trichlorophenol                                       | 88-06-2           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| 2,4,5-Trichlorophenol                                       | 95-95-4           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | ----              |
| Pentachlorophenol                                           | 87-86-5           | 2    | mg/kg |                  | <2                | ----              | ----              | <2                | ----              |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>       |                   |      |       |                  |                   |                   |                   |                   |                   |
| 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              | ----              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                     |                   |     |       | Client sample ID | SS16-120918_040   | SS17-120918_040   | SS18-120918_040   | SS19-130918_036   | SS20-130918_036   |
|------------------------------------------------------------------------|-------------------|-----|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                   |     |       |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                                               | CAS Number        | LOR | Unit  |                  | EM1814874-016     | EM1814874-017     | EM1814874-018     | EM1814874-019     | EM1814874-020     |
|                                                                        |                   |     |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>      |                   |     |       |                  |                   |                   |                   |                   |                   |
| 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               | ----              |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----              | 10  | mg/kg |                  | <10               | <10               | <10               | <10               | <10               |
| C10 - C14 Fraction                                                     | ----              | 50  | mg/kg |                  | <50               | <50               | <50               | <50               | <50               |
| C15 - C28 Fraction                                                     | ----              | 100 | mg/kg |                  | 140               | 110               | <100              | <100              | 2920              |
| C29 - C36 Fraction                                                     | ----              | 100 | mg/kg |                  | 190               | 150               | 120               | <100              | 2450              |
| ^ C10 - C36 Fraction (sum)                                             | ----              | 50  | mg/kg |                  | 330               | 260               | 120               | <50               | 5370              |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10            | 10  | mg/kg |                  | <10               | <10               | <10               | <10               | <10               |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX       | 10  | mg/kg |                  | <10               | <10               | <10               | <10               | <10               |
| >C10 - C16 Fraction                                                    | ----              | 50  | mg/kg |                  | <50               | <50               | <50               | <50               | <50               |
| >C16 - C34 Fraction                                                    | ----              | 100 | mg/kg |                  | 270               | 210               | 170               | 140               | 5020              |
| >C34 - C40 Fraction                                                    | ----              | 100 | mg/kg |                  | <100              | <100              | <100              | <100              | 690               |
| ^ >C10 - C40 Fraction (sum)                                            | ----              | 50  | mg/kg |                  | 270               | 210               | 170               | 140               | 5710              |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                           | ----              | 50  | mg/kg |                  | <50               | <50               | <50               | <50               | <50               |
| <b>EP080: BTEXN</b>                                                    |                   |     |       |                  |                   |                   |                   |                   |                   |
| Benzene                                                                | 71-43-2           | 0.2 | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Toluene                                                                | 108-88-3          | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| Ethylbenzene                                                           | 100-41-4          | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| meta- & para-Xylene                                                    | 108-38-3 106-42-3 | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ortho-Xylene                                                           | 95-47-6           | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ^ Sum of BTEX                                                          | ----              | 0.2 | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| ^ Total Xylenes                                                        | ----              | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| Naphthalene                                                            | 91-20-3           | 1   | mg/kg |                  | <1                | <1                | <1                | <1                | <1                |
| <b>EP066S: PCB Surrogate</b>                                           |                   |     |       |                  |                   |                   |                   |                   |                   |
| Decachlorobiphenyl                                                     | 2051-24-3         | 0.1 | %     |                  | 74.4              | ----              | ----              | 78.3              | ----              |



## Analytical Results

|                                                     |            |      |      |                  |                   |                   |                   |                   |                   |
|-----------------------------------------------------|------------|------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)                  |            |      |      | Client sample ID | SS16-120918_040   | SS17-120918_040   | SS18-120918_040   | SS19-130918_036   | SS20-130918_036   |
| Client sampling date / time                         |            |      |      |                  | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 12-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                            | CAS Number | LOR  | Unit |                  | EM1814874-016     | EM1814874-017     | EM1814874-018     | EM1814874-019     | EM1814874-020     |
|                                                     |            |      |      | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |            |      |      |                  |                   |                   |                   |                   |                   |
| Dibromo-DDE                                         | 21655-73-2 | 0.05 | %    |                  | 108               | 111               | 110               | 114               | 76.8              |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |            |      |      |                  |                   |                   |                   |                   |                   |
| DEF                                                 | 78-48-8    | 0.05 | %    |                  | 96.0              | 96.5              | 96.6              | 92.8              | 92.9              |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |            |      |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                           | 13127-88-3 | 0.5  | %    |                  | 85.4              | ----              | ----              | 90.0              | ----              |
| 2-Chlorophenol-D4                                   | 93951-73-6 | 0.5  | %    |                  | 95.8              | ----              | ----              | 100               | ----              |
| 2,4,6-Tribromophenol                                | 118-79-6   | 0.5  | %    |                  | 84.9              | ----              | ----              | 90.2              | ----              |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |            |      |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                    | 321-60-8   | 0.5  | %    |                  | 102               | ----              | ----              | 98.2              | ----              |
| Anthracene-d10                                      | 1719-06-8  | 0.5  | %    |                  | 96.6              | ----              | ----              | 100               | ----              |
| 4-Terphenyl-d14                                     | 1718-51-0  | 0.5  | %    |                  | 90.0              | ----              | ----              | 94.4              | ----              |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |            |      |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                               | 17060-07-0 | 0.2  | %    |                  | 56.3              | 76.1              | 62.3              | 71.1              | 80.1              |
| Toluene-D8                                          | 2037-26-5  | 0.2  | %    |                  | 63.1              | 74.9              | 55.8              | 60.4              | 69.5              |
| 4-Bromofluorobenzene                                | 460-00-4   | 0.2  | %    |                  | 71.2              | 78.6              | 69.7              | 74.6              | 82.0              |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                  |            |      |       | Client sample ID | SS21-130918_036   | SS22-130918_038   | SS23-130918_038   | SS24-130918_038   | SS25-130918_038   |
|---------------------------------------------------------------------|------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                         |            |      |       |                  | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                                            | CAS Number | LOR  | Unit  |                  | EM1814874-021     | EM1814874-022     | EM1814874-023     | EM1814874-024     | EM1814874-025     |
|                                                                     |            |      |       | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EA055: Moisture Content (Dried @ 105-110°C)</b>                  |            |      |       |                  |                   |                   |                   |                   |                   |
| Moisture Content                                                    | ----       | 1.0  | %     |                  | 39.9              | 31.4              | 34.6              | 29.6              | 31.0              |
| <b>EG005T: Total Metals by ICP-AES</b>                              |            |      |       |                  |                   |                   |                   |                   |                   |
| Barium                                                              | 7440-39-3  | 10   | mg/kg | ----             | ----              | ----              | 60                | ----              | ----              |
| Beryllium                                                           | 7440-41-7  | 1    | mg/kg | ----             | ----              | ----              | 1                 | ----              | ----              |
| Boron                                                               | 7440-42-8  | 50   | mg/kg | ----             | ----              | ----              | <50               | ----              | ----              |
| Cobalt                                                              | 7440-48-4  | 2    | mg/kg | ----             | ----              | ----              | 8                 | ----              | ----              |
| Manganese                                                           | 7439-96-5  | 5    | mg/kg | ----             | ----              | ----              | 25                | ----              | ----              |
| Selenium                                                            | 7782-49-2  | 5    | mg/kg | ----             | ----              | ----              | <5                | ----              | ----              |
| Vanadium                                                            | 7440-62-2  | 5    | mg/kg | ----             | ----              | ----              | 30                | ----              | ----              |
| Arsenic                                                             | 7440-38-2  | 5    | mg/kg | <5               | <5                | <5                | <5                | <5                | <5                |
| Cadmium                                                             | 7440-43-9  | 1    | mg/kg | <1               | <1                | <1                | <1                | <1                | <1                |
| Chromium                                                            | 7440-47-3  | 2    | mg/kg | <2               | 12                | 12                | 10                | 22                |                   |
| Copper                                                              | 7440-50-8  | 5    | mg/kg | <5               | 10                | 15                | 8                 | 19                |                   |
| Lead                                                                | 7439-92-1  | 5    | mg/kg | <5               | 14                | 16                | 13                | 13                |                   |
| Nickel                                                              | 7440-02-0  | 2    | mg/kg | <2               | 4                 | 5                 | 6                 | 21                |                   |
| Zinc                                                                | 7440-66-6  | 5    | mg/kg | <5               | 11                | 15                | 14                | 27                |                   |
| <b>EG035T: Total Recoverable Mercury by FIMS</b>                    |            |      |       |                  |                   |                   |                   |                   |                   |
| Mercury                                                             | 7439-97-6  | 0.1  | mg/kg | <0.1             | <0.1              | <0.1              | <0.1              | <0.1              | <0.1              |
| <b>EG048: Hexavalent Chromium (Alkaline Digest)</b>                 |            |      |       |                  |                   |                   |                   |                   |                   |
| Hexavalent Chromium                                                 | 18540-29-9 | 0.5  | mg/kg | ----             | ----              | <0.5              | ----              | ----              | ----              |
| <b>EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser</b> |            |      |       |                  |                   |                   |                   |                   |                   |
| Weak Acid Dissociable Cyanide                                       | ----       | 1    | mg/kg | ----             | ----              | <1                | ----              | ----              | ----              |
| <b>EP066: Polychlorinated Biphenyls (PCB)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| Total Polychlorinated biphenyls                                     | ----       | 0.1  | mg/kg | ----             | ----              | <0.1              | ----              | ----              | ----              |
| <b>EP068A: Organochlorine Pesticides (OC)</b>                       |            |      |       |                  |                   |                   |                   |                   |                   |
| alpha-BHC                                                           | 319-84-6   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Hexachlorobenzene (HCB)                                             | 118-74-1   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| beta-BHC                                                            | 319-85-7   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| gamma-BHC                                                           | 58-89-9    | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| delta-BHC                                                           | 319-86-8   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Heptachlor                                                          | 76-44-8    | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Aldrin                                                              | 309-00-2   | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Heptachlor epoxide                                                  | 1024-57-3  | 0.05 | mg/kg | <0.05            | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| ^ Total Chlordane (sum)                                             | ----       | 0.05 | mg/kg | <0.05            | <0.05             | ----              | <0.05             | <0.05             | <0.05             |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                        |                      |      |       | Client sample ID | SS21-130918_036   | SS22-130918_038   | SS23-130918_038   | SS24-130918_038   | SS25-130918_038   |
|-----------------------------------------------------------|----------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |                      |      |       |                  | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                                  | CAS Number           | LOR  | Unit  |                  | EM1814874-021     | EM1814874-022     | EM1814874-023     | EM1814874-024     | EM1814874-025     |
|                                                           |                      |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP068A: Organochlorine Pesticides (OC) - Continued</b> |                      |      |       |                  |                   |                   |                   |                   |                   |
| trans-Chlordane                                           | 5103-74-2            | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| alpha-Endosulfan                                          | 959-98-8             | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| cis-Chlordane                                             | 5103-71-9            | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Dieldrin                                                  | 60-57-1              | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| 4,4'-DDE                                                  | 72-55-9              | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Endrin                                                    | 72-20-8              | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| beta-Endosulfan                                           | 33213-65-9           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| ^ Endosulfan (sum)                                        | 115-29-7             | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| 4,4'-DDD                                                  | 72-54-8              | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Endrin aldehyde                                           | 7421-93-4            | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Endosulfan sulfate                                        | 1031-07-8            | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| 4,4'-DDT                                                  | 50-29-3              | 0.2  | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Endrin ketone                                             | 53494-70-5           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Methoxychlor                                              | 72-43-5              | 0.2  | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Mirex                                                     | 2385-85-5            | 0.20 | mg/kg |                  | ----              | ----              | <0.20             | ----              | ----              |
| ^ Sum of Aldrin + Dieldrin                                | 309-00-2/60-57-1     | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| ^ Sum of DDD + DDE + DDT                                  | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| <b>EP068B: Organophosphorus Pesticides (OP)</b>           |                      |      |       |                  |                   |                   |                   |                   |                   |
| Dichlorvos                                                | 62-73-7              | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Demeton-S-methyl                                          | 919-86-8             | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Monocrotophos                                             | 6923-22-4            | 0.2  | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Dimethoate                                                | 60-51-5              | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Diazinon                                                  | 333-41-5             | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Chlorpyrifos-methyl                                       | 5598-13-0            | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Parathion-methyl                                          | 298-00-0             | 0.2  | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Malathion                                                 | 121-75-5             | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Fenthion                                                  | 55-38-9              | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Chlorpyrifos                                              | 2921-88-2            | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Parathion                                                 | 56-38-2              | 0.2  | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Pirimphos-ethyl                                           | 23505-41-1           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Chlorfenvinphos                                           | 470-90-6             | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Bromophos-ethyl                                           | 4824-78-6            | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Fenamiphos                                                | 22224-92-6           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Prothiofos                                                | 34643-46-4           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                          |                   |      |       | Client sample ID | SS21-130918_036   | SS22-130918_038   | SS23-130918_038   | SS24-130918_038   | SS25-130918_038   |
|-------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       |                  | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                                    | CAS Number        | LOR  | Unit  |                  | EM1814874-021     | EM1814874-022     | EM1814874-023     | EM1814874-024     | EM1814874-025     |
|                                                             |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | <0.05             |
| <b>EP068C: Triazines</b>                                    |                   |      |       |                  |                   |                   |                   |                   |                   |
| Atrazine                                                    | 1912-24-9         | 0.05 | mg/kg |                  | ----              | ----              | <0.05             | ----              | ----              |
| <b>EP068D: Pyrethroids</b>                                  |                   |      |       |                  |                   |                   |                   |                   |                   |
| Bifenthrin                                                  | 82657-04-3        | 0.05 | mg/kg |                  | ----              | ----              | <0.05             | ----              | ----              |
| <b>EP075(SIM)A: Phenolic Compounds</b>                      |                   |      |       |                  |                   |                   |                   |                   |                   |
| Phenol                                                      | 108-95-2          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 2-Chlorophenol                                              | 95-57-8           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 2-Methylphenol                                              | 95-48-7           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 3- & 4-Methylphenol                                         | 1319-77-3         | 1    | mg/kg |                  | ----              | ----              | <1                | ----              | ----              |
| 2-Nitrophenol                                               | 88-75-5           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 2,4-Dimethylphenol                                          | 105-67-9          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 2,4-Dichlorophenol                                          | 120-83-2          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 2,6-Dichlorophenol                                          | 87-65-0           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 4-Chloro-3-methylphenol                                     | 59-50-7           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 2,4,6-Trichlorophenol                                       | 88-06-2           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| 2,4,5-Trichlorophenol                                       | 95-95-4           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Pentachlorophenol                                           | 87-86-5           | 2    | mg/kg |                  | ----              | ----              | <2                | ----              | ----              |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>       |                   |      |       |                  |                   |                   |                   |                   |                   |
| Naphthalene                                                 | 91-20-3           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Acenaphthylene                                              | 208-96-8          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Acenaphthene                                                | 83-32-9           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Fluorene                                                    | 86-73-7           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Phenanthrene                                                | 85-01-8           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Anthracene                                                  | 120-12-7          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Fluoranthene                                                | 206-44-0          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Pyrene                                                      | 129-00-0          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Benz(a)anthracene                                           | 56-55-3           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Chrysene                                                    | 218-01-9          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Benzo(b+j)fluoranthene                                      | 205-99-2 205-82-3 | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Benzo(k)fluoranthene                                        | 207-08-9          | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Benzo(a)pyrene                                              | 50-32-8           | 0.5  | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                     |                   |     |       | Client sample ID | SS21-130918_036   | SS22-130918_038   | SS23-130918_038   | SS24-130918_038   | SS25-130918_038   |
|------------------------------------------------------------------------|-------------------|-----|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                   |     |       |                  | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                                               | CAS Number        | LOR | Unit  |                  | EM1814874-021     | EM1814874-022     | EM1814874-023     | EM1814874-024     | EM1814874-025     |
|                                                                        |                   |     |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>      |                   |     |       |                  |                   |                   |                   |                   |                   |
| Indeno(1.2.3.cd)pyrene                                                 | 193-39-5          | 0.5 | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Dibenz(a,h)anthracene                                                  | 53-70-3           | 0.5 | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| Benzo(g,h,i)perylene                                                   | 191-24-2          | 0.5 | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| ^ Sum of polycyclic aromatic hydrocarbons                              | ----              | 0.5 | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| ^ Benzo(a)pyrene TEQ (zero)                                            | ----              | 0.5 | mg/kg |                  | ----              | ----              | <0.5              | ----              | ----              |
| ^ Benzo(a)pyrene TEQ (half LOR)                                        | ----              | 0.5 | mg/kg |                  | ----              | ----              | 0.6               | ----              | ----              |
| ^ Benzo(a)pyrene TEQ (LOR)                                             | ----              | 0.5 | mg/kg |                  | ----              | ----              | 1.2               | ----              | ----              |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----              | 10  | mg/kg |                  | <10               | <10               | <10               | <10               | <10               |
| C10 - C14 Fraction                                                     | ----              | 50  | mg/kg |                  | <50               | <50               | <50               | <50               | <50               |
| C15 - C28 Fraction                                                     | ----              | 100 | mg/kg |                  | <100              | <100              | <100              | <100              | <100              |
| C29 - C36 Fraction                                                     | ----              | 100 | mg/kg |                  | 220               | <100              | <100              | <100              | <100              |
| ^ C10 - C36 Fraction (sum)                                             | ----              | 50  | mg/kg |                  | 220               | <50               | <50               | <50               | <50               |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10            | 10  | mg/kg |                  | <10               | <10               | <10               | <10               | <10               |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX       | 10  | mg/kg |                  | <10               | <10               | <10               | <10               | <10               |
| >C10 - C16 Fraction                                                    | ----              | 50  | mg/kg |                  | <50               | <50               | <50               | <50               | <50               |
| >C16 - C34 Fraction                                                    | ----              | 100 | mg/kg |                  | 220               | <100              | <100              | <100              | <100              |
| >C34 - C40 Fraction                                                    | ----              | 100 | mg/kg |                  | 110               | <100              | <100              | <100              | <100              |
| ^ >C10 - C40 Fraction (sum)                                            | ----              | 50  | mg/kg |                  | 330               | <50               | <50               | <50               | <50               |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                           | ----              | 50  | mg/kg |                  | <50               | <50               | <50               | <50               | <50               |
| <b>EP080: BTEXN</b>                                                    |                   |     |       |                  |                   |                   |                   |                   |                   |
| Benzene                                                                | 71-43-2           | 0.2 | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| Toluene                                                                | 108-88-3          | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| Ethylbenzene                                                           | 100-41-4          | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| meta- & para-Xylene                                                    | 108-38-3 106-42-3 | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ortho-Xylene                                                           | 95-47-6           | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| ^ Sum of BTEX                                                          | ----              | 0.2 | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | <0.2              |
| ^ Total Xylenes                                                        | ----              | 0.5 | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | <0.5              |
| Naphthalene                                                            | 91-20-3           | 1   | mg/kg |                  | <1                | <1                | <1                | <1                | <1                |
| <b>EP066S: PCB Surrogate</b>                                           |                   |     |       |                  |                   |                   |                   |                   |                   |
| Decachlorobiphenyl                                                     | 2051-24-3         | 0.1 | %     |                  | ----              | ----              | 87.1              | ----              | ----              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                  |            |      |      | Client sample ID | SS21-130918_036   | SS22-130918_038   | SS23-130918_038   | SS24-130918_038   | SS25-130918_038   |
|-----------------------------------------------------|------------|------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                         |            |      |      |                  | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 |
| Compound                                            | CAS Number | LOR  | Unit |                  | EM1814874-021     | EM1814874-022     | EM1814874-023     | EM1814874-024     | EM1814874-025     |
|                                                     |            |      |      | Result           | Result            | Result            | Result            | Result            | Result            |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |            |      |      |                  |                   |                   |                   |                   |                   |
| Dibromo-DDE                                         | 21655-73-2 | 0.05 | %    |                  | 93.2              | 94.4              | 96.0              | 101               | 99.5              |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |            |      |      |                  |                   |                   |                   |                   |                   |
| DEF                                                 | 78-48-8    | 0.05 | %    |                  | 130               | 77.6              | 83.1              | 94.3              | 124               |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |            |      |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                           | 13127-88-3 | 0.5  | %    |                  | ----              | ----              | 82.2              | ----              | ----              |
| 2-Chlorophenol-D4                                   | 93951-73-6 | 0.5  | %    |                  | ----              | ----              | 94.6              | ----              | ----              |
| 2,4,6-Tribromophenol                                | 118-79-6   | 0.5  | %    |                  | ----              | ----              | 82.8              | ----              | ----              |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |            |      |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                    | 321-60-8   | 0.5  | %    |                  | ----              | ----              | 98.5              | ----              | ----              |
| Anthracene-d10                                      | 1719-06-8  | 0.5  | %    |                  | ----              | ----              | 107               | ----              | ----              |
| 4-Terphenyl-d14                                     | 1718-51-0  | 0.5  | %    |                  | ----              | ----              | 101               | ----              | ----              |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |            |      |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                               | 17060-07-0 | 0.2  | %    |                  | 66.0              | 51.3              | 73.0              | 82.1              | 67.8              |
| Toluene-D8                                          | 2037-26-5  | 0.2  | %    |                  | 96.1              | 55.2              | 79.9              | 66.7              | 72.6              |
| 4-Bromofluorobenzene                                | 460-00-4   | 0.2  | %    |                  | 90.0              | 81.1              | 94.8              | 99.8              | 90.9              |



## Analytical Results

|                                             |            |      |                   |               |                 |       |       |       |       |
|---------------------------------------------|------------|------|-------------------|---------------|-----------------|-------|-------|-------|-------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)          |            |      | Client sample ID  |               | SS26-130918_038 | ----  | ----  | ----  | ----  |
| Client sampling date / time                 |            |      | 13-Sep-2018 00:00 |               | ----            | ----  | ----  | ----  | ----  |
| Compound                                    | CAS Number | LOR  | Unit              | EM1814874-026 | -----           | ----- | ----- | ----- | ----- |
| Result                                      |            |      |                   | ----          | ----            | ----  | ----  | ----  | ----  |
| EA055: Moisture Content (Dried @ 105-110°C) |            |      |                   |               |                 |       |       |       |       |
| Moisture Content                            | ----       | 1.0  | %                 | 35.1          | ----            | ----  | ----  | ----  | ----  |
| EG005T: Total Metals by ICP-AES             |            |      |                   |               |                 |       |       |       |       |
| Arsenic                                     | 7440-38-2  | 5    | mg/kg             | <5            | ----            | ----  | ----  | ----  | ----  |
| Cadmium                                     | 7440-43-9  | 1    | mg/kg             | <1            | ----            | ----  | ----  | ----  | ----  |
| Chromium                                    | 7440-47-3  | 2    | mg/kg             | 13            | ----            | ----  | ----  | ----  | ----  |
| Copper                                      | 7440-50-8  | 5    | mg/kg             | 10            | ----            | ----  | ----  | ----  | ----  |
| Lead                                        | 7439-92-1  | 5    | mg/kg             | 18            | ----            | ----  | ----  | ----  | ----  |
| Nickel                                      | 7440-02-0  | 2    | mg/kg             | 6             | ----            | ----  | ----  | ----  | ----  |
| Zinc                                        | 7440-66-6  | 5    | mg/kg             | 18            | ----            | ----  | ----  | ----  | ----  |
| EG035T: Total Recoverable Mercury by FIMS   |            |      |                   |               |                 |       |       |       |       |
| Mercury                                     | 7439-97-6  | 0.1  | mg/kg             | <0.1          | ----            | ----  | ----  | ----  | ----  |
| EP068A: Organochlorine Pesticides (OC)      |            |      |                   |               |                 |       |       |       |       |
| alpha-BHC                                   | 319-84-6   | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Hexachlorobenzene (HCB)                     | 118-74-1   | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| beta-BHC                                    | 319-85-7   | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| gamma-BHC                                   | 58-89-9    | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| delta-BHC                                   | 319-86-8   | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Heptachlor                                  | 76-44-8    | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Aldrin                                      | 309-00-2   | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Heptachlor epoxide                          | 1024-57-3  | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| ^ Total Chlordane (sum)                     | ----       | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| trans-Chlordane                             | 5103-74-2  | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| alpha-Endosulfan                            | 959-98-8   | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| cis-Chlordane                               | 5103-71-9  | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Dieldrin                                    | 60-57-1    | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| 4,4'-DDE                                    | 72-55-9    | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Endrin                                      | 72-20-8    | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| beta-Endosulfan                             | 33213-65-9 | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| ^ Endosulfan (sum)                          | 115-29-7   | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| 4,4'-DDD                                    | 72-54-8    | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Endrin aldehyde                             | 7421-93-4  | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| Endosulfan sulfate                          | 1031-07-8  | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |
| 4,4'-DDT                                    | 50-29-3    | 0.2  | mg/kg             | <0.2          | ----            | ----  | ----  | ----  | ----  |
| Endrin ketone                               | 53494-70-5 | 0.05 | mg/kg             | <0.05         | ----            | ----  | ----  | ----  | ----  |





## Analytical Results

|                                                                 |                   |      |       |                   |                 |       |       |       |       |
|-----------------------------------------------------------------|-------------------|------|-------|-------------------|-----------------|-------|-------|-------|-------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)                              |                   |      |       | Client sample ID  | SS26-130918_038 | ----  | ----  | ----  | ----  |
| Client sampling date / time                                     |                   |      |       | 13-Sep-2018 00:00 | ----            | ----  | ----  | ----  | ----  |
| Compound                                                        | CAS Number        | LOR  | Unit  | EM1814874-026     | -----           | ----- | ----- | ----- | ----- |
| Result                                                          |                   |      |       | ----              | ----            | ----  | ----  | ----  | ----  |
| EP068A: Organochlorine Pesticides (OC) - Continued              |                   |      |       |                   |                 |       |       |       |       |
| Methoxychlor                                                    | 72-43-5           | 0.2  | mg/kg | <0.2              | ----            | ----  | ----  | ----  | ----  |
| ^ Sum of Aldrin + Dieldrin                                      | 309-00-2/60-57-1  | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| ^ Sum of DDD + DDE + DDT                                        | 72-54-8/72-55-9/5 | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
|                                                                 | 0-2               |      |       |                   |                 |       |       |       |       |
| EP068B: Organophosphorus Pesticides (OP)                        |                   |      |       |                   |                 |       |       |       |       |
| Dichlorvos                                                      | 62-73-7           | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Demeton-S-methyl                                                | 919-86-8          | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Monocrotophos                                                   | 6923-22-4         | 0.2  | mg/kg | <0.2              | ----            | ----  | ----  | ----  | ----  |
| Dimethoate                                                      | 60-51-5           | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Diazinon                                                        | 333-41-5          | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Chlorpyrifos-methyl                                             | 5598-13-0         | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Parathion-methyl                                                | 298-00-0          | 0.2  | mg/kg | <0.2              | ----            | ----  | ----  | ----  | ----  |
| Malathion                                                       | 121-75-5          | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Fenthion                                                        | 55-38-9           | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Chlorpyrifos                                                    | 2921-88-2         | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Parathion                                                       | 56-38-2           | 0.2  | mg/kg | <0.2              | ----            | ----  | ----  | ----  | ----  |
| Pirimphos-ethyl                                                 | 23505-41-1        | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Chlorfenvinphos                                                 | 470-90-6          | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Bromophos-ethyl                                                 | 4824-78-6         | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Fenamiphos                                                      | 22224-92-6        | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Prothiofos                                                      | 34643-46-4        | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Ethion                                                          | 563-12-2          | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Carbophenothion                                                 | 786-19-6          | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| Azinphos Methyl                                                 | 86-50-0           | 0.05 | mg/kg | <0.05             | ----            | ----  | ----  | ----  | ----  |
| EP080/071: Total Petroleum Hydrocarbons                         |                   |      |       |                   |                 |       |       |       |       |
| C6 - C9 Fraction                                                | ----              | 10   | mg/kg | <10               | ----            | ----  | ----  | ----  | ----  |
| C10 - C14 Fraction                                              | ----              | 50   | mg/kg | <50               | ----            | ----  | ----  | ----  | ----  |
| C15 - C28 Fraction                                              | ----              | 100  | mg/kg | <100              | ----            | ----  | ----  | ----  | ----  |
| C29 - C36 Fraction                                              | ----              | 100  | mg/kg | <100              | ----            | ----  | ----  | ----  | ----  |
| ^ C10 - C36 Fraction (sum)                                      | ----              | 50   | mg/kg | <50               | ----            | ----  | ----  | ----  | ----  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions |                   |      |       |                   |                 |       |       |       |       |
| C6 - C10 Fraction                                               | C6_C10            | 10   | mg/kg | <10               | ----            | ----  | ----  | ----  | ----  |
| ^ C6 - C10 Fraction minus BTEX (F1)                             | C6_C10-BTEX       | 10   | mg/kg | <10               | ----            | ----  | ----  | ----  | ----  |
| >C10 - C16 Fraction                                             | ----              | 50   | mg/kg | <50               | ----            | ----  | ----  | ----  | ----  |



## Analytical Results

|                                                                             |                   |      |       |                   |                 |       |       |       |       |
|-----------------------------------------------------------------------------|-------------------|------|-------|-------------------|-----------------|-------|-------|-------|-------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                          |                   |      |       | Client sample ID  | SS26-130918_038 | ----  | ----  | ----  | ----  |
| Client sampling date / time                                                 |                   |      |       | 13-Sep-2018 00:00 | ----            | ----  | ----  | ----  | ----  |
| Compound                                                                    | CAS Number        | LOR  | Unit  | EM1814874-026     | -----           | ----- | ----- | ----- | ----- |
| Result                                                                      |                   |      |       | ----              | ----            | ----  | ----  | ----  | ----  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued |                   |      |       |                   |                 |       |       |       |       |
| >C16 - C34 Fraction                                                         | ----              | 100  | mg/kg | <100              | ----            | ----  | ----  | ----  | ----  |
| >C34 - C40 Fraction                                                         | ----              | 100  | mg/kg | <100              | ----            | ----  | ----  | ----  | ----  |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | <50               | ----            | ----  | ----  | ----  | ----  |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                                | ----              | 50   | mg/kg | <50               | ----            | ----  | ----  | ----  | ----  |
| EP080: BTEXN                                                                |                   |      |       |                   |                 |       |       |       |       |
| Benzene                                                                     | 71-43-2           | 0.2  | mg/kg | <0.2              | ----            | ----  | ----  | ----  | ----  |
| Toluene                                                                     | 108-88-3          | 0.5  | mg/kg | <0.5              | ----            | ----  | ----  | ----  | ----  |
| Ethylbenzene                                                                | 100-41-4          | 0.5  | mg/kg | <0.5              | ----            | ----  | ----  | ----  | ----  |
| meta- & para-Xylene                                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | <0.5              | ----            | ----  | ----  | ----  | ----  |
| ortho-Xylene                                                                | 95-47-6           | 0.5  | mg/kg | <0.5              | ----            | ----  | ----  | ----  | ----  |
| ^ Sum of BTEX                                                               | ----              | 0.2  | mg/kg | <0.2              | ----            | ----  | ----  | ----  | ----  |
| ^ Total Xylenes                                                             | ----              | 0.5  | mg/kg | <0.5              | ----            | ----  | ----  | ----  | ----  |
| Naphthalene                                                                 | 91-20-3           | 1    | mg/kg | <1                | ----            | ----  | ----  | ----  | ----  |
| EP068S: Organochlorine Pesticide Surrogate                                  |                   |      |       |                   |                 |       |       |       |       |
| Dibromo-DDE                                                                 | 21655-73-2        | 0.05 | %     | 97.9              | ----            | ----  | ----  | ----  | ----  |
| EP068T: Organophosphorus Pesticide Surrogate                                |                   |      |       |                   |                 |       |       |       |       |
| DEF                                                                         | 78-48-8           | 0.05 | %     | 81.8              | ----            | ----  | ----  | ----  | ----  |
| EP080S: TPH(V)/BTEX Surrogates                                              |                   |      |       |                   |                 |       |       |       |       |
| 1,2-Dichloroethane-D4                                                       | 17060-07-0        | 0.2  | %     | 67.3              | ----            | ----  | ----  | ----  | ----  |
| Toluene-D8                                                                  | 2037-26-5         | 0.2  | %     | 64.3              | ----            | ----  | ----  | ----  | ----  |
| 4-Bromofluorobenzene                                                        | 460-00-4          | 0.2  | %     | 93.9              | ----            | ----  | ----  | ----  | ----  |



## Analytical Results

Sub-Matrix: **WATER**  
 (Matrix: **WATER**)

Client sample ID

|                                                  |                          |        |      | RB01              | TB01              | ----  | ----  | ----  |
|--------------------------------------------------|--------------------------|--------|------|-------------------|-------------------|-------|-------|-------|
| Client sampling date / time                      |                          |        |      | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | ----  | ----  | ----  |
| Compound                                         | CAS Number               | LOR    | Unit | EM1814874-027     | EM1814874-028     | ----- | ----- | ----- |
|                                                  |                          |        |      | Result            | Result            | ----  | ----  | ----  |
| <b>EG020T: Total Metals by ICP-MS</b>            |                          |        |      |                   |                   |       |       |       |
| Arsenic                                          | 7440-38-2                | 0.001  | mg/L | <0.001            | ----              | ----  | ----  | ----  |
| Cadmium                                          | 7440-43-9                | 0.0001 | mg/L | <0.0001           | ----              | ----  | ----  | ----  |
| Chromium                                         | 7440-47-3                | 0.001  | mg/L | <0.001            | ----              | ----  | ----  | ----  |
| Copper                                           | 7440-50-8                | 0.001  | mg/L | <0.001            | ----              | ----  | ----  | ----  |
| Lead                                             | 7439-92-1                | 0.001  | mg/L | <0.001            | ----              | ----  | ----  | ----  |
| Nickel                                           | 7440-02-0                | 0.001  | mg/L | <0.001            | ----              | ----  | ----  | ----  |
| Zinc                                             | 7440-66-6                | 0.005  | mg/L | <0.005            | ----              | ----  | ----  | ----  |
| <b>EG035T: Total Recoverable Mercury by FIMS</b> |                          |        |      |                   |                   |       |       |       |
| Mercury                                          | 7439-97-6                | 0.0001 | mg/L | <0.0001           | ----              | ----  | ----  | ----  |
| <b>EP068A: Organochlorine Pesticides (OC)</b>    |                          |        |      |                   |                   |       |       |       |
| alpha-BHC                                        | 319-84-6                 | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Hexachlorobenzene (HCB)                          | 118-74-1                 | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| beta-BHC                                         | 319-85-7                 | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| gamma-BHC                                        | 58-89-9                  | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| delta-BHC                                        | 319-86-8                 | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Heptachlor                                       | 76-44-8                  | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Aldrin                                           | 309-00-2                 | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Heptachlor epoxide                               | 1024-57-3                | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| trans-Chlordane                                  | 5103-74-2                | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| alpha-Endosulfan                                 | 959-98-8                 | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| cis-Chlordane                                    | 5103-71-9                | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Dieldrin                                         | 60-57-1                  | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| 4,4'-DDE                                         | 72-55-9                  | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Endrin                                           | 72-20-8                  | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| beta-Endosulfan                                  | 33213-65-9               | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| 4,4'-DDD                                         | 72-54-8                  | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Endrin aldehyde                                  | 7421-93-4                | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Endosulfan sulfate                               | 1031-07-8                | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| 4,4'-DDT                                         | 50-29-3                  | 2.0    | µg/L | <2.0              | ----              | ----  | ----  | ----  |
| Endrin ketone                                    | 53494-70-5               | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| Methoxychlor                                     | 72-43-5                  | 2.0    | µg/L | <2.0              | ----              | ----  | ----  | ----  |
| ^ Total Chlordane (sum)                          | ----                     | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| ^ Sum of DDD + DDE + DDT                         | 72-54-8/72-55-9/5<br>0-2 | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |
| ^ Sum of Aldrin + Dieldrin                       | 309-00-2/60-57-1         | 0.5    | µg/L | <0.5              | ----              | ----  | ----  | ----  |





## Analytical Results

Sub-Matrix: **WATER**  
 (Matrix: **WATER**)

Client sample ID

|                             |            |     |      | RB01              | TB01              | ----  | ----  | ----  |
|-----------------------------|------------|-----|------|-------------------|-------------------|-------|-------|-------|
| Client sampling date / time |            |     |      | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | ----  | ----  | ----  |
| Compound                    | CAS Number | LOR | Unit | EM1814874-027     | EM1814874-028     | ----- | ----- | ----- |
|                             |            |     |      | Result            | Result            | ----  | ----  | ----  |

### EP068A: Organochlorine Pesticides (OC) - Continued

### EP068B: Organophosphorus Pesticides (OP)

|                     |            |     |      |      |      |      |      |      |
|---------------------|------------|-----|------|------|------|------|------|------|
| Dichlorvos          | 62-73-7    | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Demeton-S-methyl    | 919-86-8   | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Monocrotophos       | 6923-22-4  | 2.0 | µg/L | <2.0 | ---- | ---- | ---- | ---- |
| Dimethoate          | 60-51-5    | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Diazinon            | 333-41-5   | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Chlorpyrifos-methyl | 5598-13-0  | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Parathion-methyl    | 298-00-0   | 2.0 | µg/L | <2.0 | ---- | ---- | ---- | ---- |
| Malathion           | 121-75-5   | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Fenthion            | 55-38-9    | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Chlorpyrifos        | 2921-88-2  | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Parathion           | 56-38-2    | 2.0 | µg/L | <2.0 | ---- | ---- | ---- | ---- |
| Pirimphos-ethyl     | 23505-41-1 | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Chlorfenvinphos     | 470-90-6   | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Bromophos-ethyl     | 4824-78-6  | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Fenamiphos          | 22224-92-6 | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Prothiofos          | 34643-46-4 | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Ethion              | 563-12-2   | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Carbophenothion     | 786-19-6   | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Azinphos Methyl     | 86-50-0    | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |

### EP075(SIM)A: Phenolic Compounds

|                         |           |     |      |      |      |      |      |      |
|-------------------------|-----------|-----|------|------|------|------|------|------|
| Phenol                  | 108-95-2  | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 2-Chlorophenol          | 95-57-8   | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 2-Methylphenol          | 95-48-7   | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 3- & 4-Methylphenol     | 1319-77-3 | 2.0 | µg/L | <2.0 | ---- | ---- | ---- | ---- |
| 2-Nitrophenol           | 88-75-5   | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 2,4-Dimethylphenol      | 105-67-9  | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 2,4-Dichlorophenol      | 120-83-2  | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 2,6-Dichlorophenol      | 87-65-0   | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 4-Chloro-3-methylphenol | 59-50-7   | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 2,4,6-Trichlorophenol   | 88-06-2   | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| 2,4,5-Trichlorophenol   | 95-95-4   | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Pentachlorophenol       | 87-86-5   | 2.0 | µg/L | <2.0 | ---- | ---- | ---- | ---- |

### EP075(SIM)B: Polynuclear Aromatic Hydrocarbons



## Analytical Results

Sub-Matrix: **WATER**  
 (Matrix: **WATER**)

Client sample ID

|                             |            |     |      | RB01              | TB01              | ----  | ----  | ----  |
|-----------------------------|------------|-----|------|-------------------|-------------------|-------|-------|-------|
| Client sampling date / time |            |     |      | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | ----  | ----  | ----  |
| Compound                    | CAS Number | LOR | Unit | EM1814874-027     | EM1814874-028     | ----- | ----- | ----- |
|                             |            |     |      | Result            | Result            | ----  | ----  | ----  |

### EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued

|                                           |                   |     |      |      |      |      |      |      |
|-------------------------------------------|-------------------|-----|------|------|------|------|------|------|
| Naphthalene                               | 91-20-3           | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Acenaphthylene                            | 208-96-8          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Acenaphthene                              | 83-32-9           | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Fluorene                                  | 86-73-7           | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Phenanthrene                              | 85-01-8           | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Anthracene                                | 120-12-7          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Fluoranthene                              | 206-44-0          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Pyrene                                    | 129-00-0          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Benz(a)anthracene                         | 56-55-3           | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Chrysene                                  | 218-01-9          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Benzo(b+j)fluoranthene                    | 205-99-2 205-82-3 | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Benzo(k)fluoranthene                      | 207-08-9          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Benzo(a)pyrene                            | 50-32-8           | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| Indeno(1.2.3.cd)pyrene                    | 193-39-5          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Dibenz(a,h)anthracene                     | 53-70-3           | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| Benzo(g,h,i)perylene                      | 191-24-2          | 1.0 | µg/L | <1.0 | ---- | ---- | ---- | ---- |
| ^ Sum of polycyclic aromatic hydrocarbons | ----              | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |
| ^ Benzo(a)pyrene TEQ (zero)               | ----              | 0.5 | µg/L | <0.5 | ---- | ---- | ---- | ---- |

### EP080/071: Total Petroleum Hydrocarbons

|                            |      |     |      |      |      |      |      |      |
|----------------------------|------|-----|------|------|------|------|------|------|
| C6 - C9 Fraction           | ---- | 20  | µg/L | <20  | <20  | ---- | ---- | ---- |
| C10 - C14 Fraction         | ---- | 50  | µg/L | <50  | ---- | ---- | ---- | ---- |
| C15 - C28 Fraction         | ---- | 100 | µg/L | <100 | ---- | ---- | ---- | ---- |
| C29 - C36 Fraction         | ---- | 50  | µg/L | <50  | ---- | ---- | ---- | ---- |
| ^ C10 - C36 Fraction (sum) | ---- | 50  | µg/L | <50  | ---- | ---- | ---- | ---- |

### EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

|                                              |             |     |      |      |      |      |      |      |
|----------------------------------------------|-------------|-----|------|------|------|------|------|------|
| C6 - C10 Fraction                            | C6_C10      | 20  | µg/L | <20  | <20  | ---- | ---- | ---- |
| ^ C6 - C10 Fraction minus BTEX (F1)          | C6_C10-BTEX | 20  | µg/L | <20  | <20  | ---- | ---- | ---- |
| >C10 - C16 Fraction                          | ----        | 100 | µg/L | <100 | ---- | ---- | ---- | ---- |
| >C16 - C34 Fraction                          | ----        | 100 | µg/L | <100 | ---- | ---- | ---- | ---- |
| >C34 - C40 Fraction                          | ----        | 100 | µg/L | <100 | ---- | ---- | ---- | ---- |
| ^ >C10 - C40 Fraction (sum)                  | ----        | 100 | µg/L | <100 | ---- | ---- | ---- | ---- |
| ^ >C10 - C16 Fraction minus Naphthalene (F2) | ----        | 100 | µg/L | <100 | ---- | ---- | ---- | ---- |

### EP080: BTEXN



## Analytical Results

|                                                     |                   |     |      |                  |                   |                   |       |       |       |
|-----------------------------------------------------|-------------------|-----|------|------------------|-------------------|-------------------|-------|-------|-------|
| Sub-Matrix: <b>WATER</b><br>(Matrix: <b>WATER</b> ) |                   |     |      | Client sample ID | RB01              | TB01              | ----  | ----  | ----  |
| Client sampling date / time                         |                   |     |      |                  | 13-Sep-2018 00:00 | 13-Sep-2018 00:00 | ----  | ----  | ----  |
| Compound                                            | CAS Number        | LOR | Unit |                  | EM1814874-027     | EM1814874-028     | ----- | ----- | ----- |
|                                                     |                   |     |      |                  | Result            | Result            | ----  | ----  | ----  |
| <b>EP080: BTEXN - Continued</b>                     |                   |     |      |                  |                   |                   |       |       |       |
| Benzene                                             | 71-43-2           | 1   | µg/L |                  | <1                | <1                | ----  | ----  | ----  |
| Toluene                                             | 108-88-3          | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| Ethylbenzene                                        | 100-41-4          | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| meta- & para-Xylene                                 | 108-38-3 106-42-3 | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| ortho-Xylene                                        | 95-47-6           | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| ^ Total Xylenes                                     | ----              | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| ^ Sum of BTEX                                       | ----              | 1   | µg/L |                  | <1                | <1                | ----  | ----  | ----  |
| Naphthalene                                         | 91-20-3           | 5   | µg/L |                  | <5                | <5                | ----  | ----  | ----  |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |                   |     |      |                  |                   |                   |       |       |       |
| Dibromo-DDE                                         | 21655-73-2        | 0.5 | %    |                  | 84.0              | ----              | ----  | ----  | ----  |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |                   |     |      |                  |                   |                   |       |       |       |
| DEF                                                 | 78-48-8           | 0.5 | %    |                  | 80.7              | ----              | ----  | ----  | ----  |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |                   |     |      |                  |                   |                   |       |       |       |
| Phenol-d6                                           | 13127-88-3        | 1.0 | %    |                  | 29.3              | ----              | ----  | ----  | ----  |
| 2-Chlorophenol-D4                                   | 93951-73-6        | 1.0 | %    |                  | 74.4              | ----              | ----  | ----  | ----  |
| 2,4,6-Tribromophenol                                | 118-79-6          | 1.0 | %    |                  | 58.8              | ----              | ----  | ----  | ----  |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |                   |     |      |                  |                   |                   |       |       |       |
| 2-Fluorobiphenyl                                    | 321-60-8          | 1.0 | %    |                  | 68.7              | ----              | ----  | ----  | ----  |
| Anthracene-d10                                      | 1719-06-8         | 1.0 | %    |                  | 82.4              | ----              | ----  | ----  | ----  |
| 4-Terphenyl-d14                                     | 1718-51-0         | 1.0 | %    |                  | 80.0              | ----              | ----  | ----  | ----  |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |                   |     |      |                  |                   |                   |       |       |       |
| 1,2-Dichloroethane-D4                               | 17060-07-0        | 2   | %    |                  | 96.7              | 98.0              | ----  | ----  | ----  |
| Toluene-D8                                          | 2037-26-5         | 2   | %    |                  | 91.9              | 92.3              | ----  | ----  | ----  |
| 4-Bromofluorobenzene                                | 460-00-4          | 2   | %    |                  | 102               | 103               | ----  | ----  | ----  |





## Surrogate Control Limits

| Sub-Matrix: SOIL                                    |            | Recovery Limits (%) |      |
|-----------------------------------------------------|------------|---------------------|------|
| Compound                                            | CAS Number | Low                 | High |
| <b>EP066S: PCB Surrogate</b>                        |            |                     |      |
| Decachlorobiphenyl                                  | 2051-24-3  | 36                  | 140  |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |            |                     |      |
| Dibromo-DDE                                         | 21655-73-2 | 38                  | 128  |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |            |                     |      |
| DEF                                                 | 78-48-8    | 33                  | 139  |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |            |                     |      |
| Phenol-d6                                           | 13127-88-3 | 54                  | 125  |
| 2-Chlorophenol-D4                                   | 93951-73-6 | 65                  | 123  |
| 2,4,6-Tribromophenol                                | 118-79-6   | 34                  | 122  |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |            |                     |      |
| 2-Fluorobiphenyl                                    | 321-60-8   | 61                  | 125  |
| Anthracene-d10                                      | 1719-06-8  | 62                  | 130  |
| 4-Terphenyl-d14                                     | 1718-51-0  | 67                  | 133  |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |            |                     |      |
| 1,2-Dichloroethane-D4                               | 17060-07-0 | 51                  | 125  |
| Toluene-D8                                          | 2037-26-5  | 55                  | 125  |
| 4-Bromofluorobenzene                                | 460-00-4   | 56                  | 124  |

| Sub-Matrix: WATER                                   |            | Recovery Limits (%) |      |
|-----------------------------------------------------|------------|---------------------|------|
| Compound                                            | CAS Number | Low                 | High |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>   |            |                     |      |
| Dibromo-DDE                                         | 21655-73-2 | 49                  | 117  |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b> |            |                     |      |
| DEF                                                 | 78-48-8    | 51                  | 127  |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>    |            |                     |      |
| Phenol-d6                                           | 13127-88-3 | 10                  | 46   |
| 2-Chlorophenol-D4                                   | 93951-73-6 | 23                  | 104  |
| 2,4,6-Tribromophenol                                | 118-79-6   | 28                  | 130  |
| <b>EP075(SIM)T: PAH Surrogates</b>                  |            |                     |      |
| 2-Fluorobiphenyl                                    | 321-60-8   | 36                  | 114  |
| Anthracene-d10                                      | 1719-06-8  | 51                  | 119  |
| 4-Terphenyl-d14                                     | 1718-51-0  | 49                  | 127  |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>               |            |                     |      |
| 1,2-Dichloroethane-D4                               | 17060-07-0 | 73                  | 129  |
| Toluene-D8                                          | 2037-26-5  | 70                  | 125  |
| 4-Bromofluorobenzene                                | 460-00-4   | 71                  | 129  |

## CHAIN OF CUSTODY RECORD

GHD



GHD Melbourne

180 Lonsdale Street, Melbourne 3000

Telephone: 613 8687 8000 Facsimile: 613 8687 8111

Page 1 of 2

Environmental Division  
MelbourneWork Order Reference  
**EM1814874**

Telephone : + 61-3-8549 9600

PLEASE NOTE:

- E-mail results to the GHD Contact with the GHD Job Number in the e-mail subject line.

Results to be provided in ESDAT compatible format

|                                                           |                                     |                                          |
|-----------------------------------------------------------|-------------------------------------|------------------------------------------|
| Job Number<br>3136558                                     | GHD Office<br>Melbourne             | Laboratory:<br>ALS Springvale            |
| Project<br>Wonthaggi PSP - Preliminary Site Investigation | Contact Email<br>kory_auch@ghd.com  | Address:<br>2 - 4 Westall Rd, Springvale |
| GHD Contact<br>Kory Auch                                  | Quote No./GHD Reference<br>ME373/17 | Lab Contact:<br>Shirley LeCornu          |
| Standard TAT                                              |                                     |                                          |

| Sample ID              | Date         | Time | Sample Matrix<br>Soil, Sediment, Rock, Water, Air, Gaseous, Liquid | Container<br>Type<br>Vial, Bottle, Canister, etc. | NEPM Suite | TRH, BTEXN | 8 metals<br>(As, Cd, Cr, Cu, Ni, Pb, Zn, Hg) | OCP/OPP | PAH | Phenols | HOLD |
|------------------------|--------------|------|--------------------------------------------------------------------|---------------------------------------------------|------------|------------|----------------------------------------------|---------|-----|---------|------|
| 1 SS01 - 120918 - 034  | 12-Sept-2018 | AM   | Soil                                                               | 15                                                |            | X          | X                                            | X       |     |         |      |
| 2 SS02 - - 034         |              |      |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 3 SS03 - - 034         |              |      |                                                                    |                                                   | X          |            |                                              |         |     |         |      |
| 4 SS04 - - 037         |              |      |                                                                    |                                                   |            | X          | X                                            |         | X   | X       |      |
| 5 SS05 - - 037         |              |      |                                                                    |                                                   | X          |            |                                              |         |     |         |      |
| 6 SS06 - - 035         |              |      |                                                                    |                                                   | X          |            |                                              |         |     |         |      |
| 7 SS07 - - 035         |              |      |                                                                    |                                                   |            | X          | X                                            |         | X   | X       |      |
| 8 SS08 - - 039         |              |      |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 9 SS09 - - 039         |              |      |                                                                    |                                                   |            | X          | X                                            |         | X   |         |      |
| 10 SS10 - - 039        |              |      |                                                                    |                                                   | X          |            |                                              |         |     |         |      |
| 11 SS11 - - 040        |              | PM   |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 12 SS12 - - 040        |              |      |                                                                    |                                                   | X          |            |                                              |         |     |         |      |
| 13 SS13 - - 040        |              |      |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 14 SS14 - - 040        |              |      |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 15 SS15 - - 040        |              |      |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 16 SS16 - - 040        |              |      |                                                                    |                                                   | X          |            |                                              |         |     |         |      |
| 17 SS17 - - 040        |              |      |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 18 SS18 - 120918 - 040 |              |      |                                                                    |                                                   |            | X          | X                                            | X       |     |         |      |
| 19 SS19 - 130918 - 036 | 13-Sept-2018 | AM   | Soil                                                               | 15                                                | X          |            |                                              |         |     |         |      |
| 20 SS20 - 130918 - 036 | 13-Sept-2018 | AM   | Soil                                                               | 15                                                |            | X          | X                                            | X       |     |         |      |

Strong odours  
Strong odours

|                      |                 |            |                    |              |                 |            |                  |
|----------------------|-----------------|------------|--------------------|--------------|-----------------|------------|------------------|
| Sampled by:          | Kory Auch / Jsa | Date/Time: | 13-09-2018 @ 14:30 | Relinquished | Kory Auch / Jsa | Date/Time: | 13-09-18 @ 16:30 |
| Received by:         |                 | Date/Time: |                    | Relinquished |                 | Date/Time: |                  |
| Received by Courier: |                 | Date/Time: |                    | Relinquished |                 | Date/Time: |                  |
| Received by Lab:     | Ram (Am)        | Date/Time: | 12/9 9.45          |              |                 |            |                  |
| Remarks:             |                 |            |                    |              |                 |            |                  |

## CHAIN OF CUSTODY RECORD

GHD



GHD Melbourne

180 Lonsdale Street, Melbourne 3000

Telephone: 613 8687 8000 Facsimile: 613 8687 8111

| Job Number<br>3136558                                     |              | GHD Office<br>Melbourne             |                                                              | Laboratory: ALS Springvale                                                                  |                                   |            |                                              |                             |     |         |          |  |  | PLEASE NOTE:<br><br>- E-mail results to the GHD Contact with the GHD Job Number in the e-mail subject line.<br><br>Results to be provided in ESDAT compatible format |  |  |      |
|-----------------------------------------------------------|--------------|-------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------|------------|----------------------------------------------|-----------------------------|-----|---------|----------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|------|
| Project<br>Wonthaggi PSP - Preliminary Site Investigation |              |                                     |                                                              | Address: 2 - 4 Westall Rd, Springvale                                                       |                                   |            |                                              |                             |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| GHD Contact<br>Kory Auch                                  |              | Contact Email<br>kory.auch@ghd.com  |                                                              | Lab Contact: Shirley LeCornu                                                                |                                   |            |                                              |                             |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| Standard TAT                                              |              | Quote No./GHD Reference<br>ME373/17 |                                                              | Analyses Required                                                                           |                                   |            |                                              |                             |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| Sample No                                                 | Date         | Time                                | Sample Matrix<br>Soil, SLUDGE, WATER, AIR<br>AW, Groundwater | Container<br>Type<br>J, Schlar, B, bag,<br>V, can,<br>G, glass bottle,<br>P, plastic bottle | NEPM Suite                        | TRH, BTEXN | 8 metals<br>(As, Cd, Cr, Cu, Ni, Pb, Zn, Hg) | OCP/OPP                     | PAH | Phenols | TRH/BTEX |  |  |                                                                                                                                                                      |  |  | HOLD |
| 21 SS21-130918-036                                        | 13-Sept-2018 | AM                                  | Soil                                                         | IS                                                                                          |                                   | X          | X                                            | X                           |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| 22 SS22-130918-038                                        |              |                                     |                                                              |                                                                                             |                                   | X          | X                                            | X                           |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| 23 SS23-038                                               |              |                                     |                                                              |                                                                                             | X                                 |            |                                              |                             |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| 24 SS24-038                                               |              |                                     |                                                              |                                                                                             |                                   | X          | X                                            | X                           |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| 25 SS25-038                                               |              |                                     |                                                              |                                                                                             |                                   | X          | X                                            | X                           |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| 26 SS26-130918-038                                        | 13-Sept-2018 | AM                                  | Soil                                                         | IS                                                                                          |                                   | X          | X                                            | X                           |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| 27 RBO1                                                   | 13-Sept-2018 | AM                                  | L                                                            | various                                                                                     |                                   | X          | X                                            | X                           | X   | X       |          |  |  |                                                                                                                                                                      |  |  |      |
| 28 TBO1                                                   | 13-Sept-2018 | AM                                  | L                                                            | 2v                                                                                          |                                   |            |                                              |                             |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| Sampled by: Kory Auch / K. Auch                           |              |                                     | Date/Time: 13-09-2018 @ 14:30                                |                                                                                             | Relinquished: Kory Auch / K. Auch |            |                                              | Date/Time: 13-09-18 @ 16:30 |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| Received by:                                              |              |                                     | Date/Time:                                                   |                                                                                             | Relinquished:                     |            |                                              | Date/Time:                  |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| Received by Courier:                                      |              |                                     | Date/Time:                                                   |                                                                                             | Relinquished:                     |            |                                              | Date/Time:                  |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| Received by Lab: K. Auch (AUS)                            |              |                                     | Date/Time: 14/9 945                                          |                                                                                             | Relinquished:                     |            |                                              | Date/Time:                  |     |         |          |  |  |                                                                                                                                                                      |  |  |      |
| Remarks:                                                  |              |                                     |                                                              |                                                                                             |                                   |            |                                              |                             |     |         |          |  |  |                                                                                                                                                                      |  |  |      |



## SAMPLE RECEIPT NOTIFICATION (SRN)

**Work Order : EM1814874**

|              |                                                             |              |                                                 |
|--------------|-------------------------------------------------------------|--------------|-------------------------------------------------|
| Client       | : GHD PTY LTD                                               | Laboratory   | : Environmental Division Melbourne              |
| Contact      | : KORY AUCH                                                 | Contact      | : Shirley LeCornu                               |
| Address      | : LEVEL 8, 180 LONSDALE ST<br>MELBOURNE VIC, AUSTRALIA 3001 | Address      | : 4 Westall Rd Springvale VIC Australia<br>3171 |
| E-mail       | : kory.auch@ghd.com                                         | E-mail       | : shirley.lecornu@Alsglobal.com                 |
| Telephone    | : ----                                                      | Telephone    | : +61-3-8549 9630                               |
| Facsimile    | : ----                                                      | Facsimile    | : +61-3-8549 9626                               |
| Project      | : 3136558                                                   | Page         | : 1 of 3                                        |
| Order number | :                                                           | Quote number | : EM2017GHDSE0020 (ME/373/17)                   |
| C-O-C number | : ----                                                      | QC Level     | : NEPM 2013 B3 & ALS QC Standard                |
| Site         | : Wonthaggi PSP - Preliminary Site<br>Investigation         |              |                                                 |
| Sampler      | : ISAAC, KORY AUCH                                          |              |                                                 |

### Dates

|                           |                     |                          |                      |
|---------------------------|---------------------|--------------------------|----------------------|
| Date Samples Received     | : 14-Sep-2018 09:45 | Issue Date               | : 17-Sep-2018        |
| Client Requested Due Date | : 21-Sep-2018       | Scheduled Reporting Date | : <b>21-Sep-2018</b> |

### Delivery Details

|                      |           |                                    |                       |
|----------------------|-----------|------------------------------------|-----------------------|
| Mode of Delivery     | : Carrier | Security Seal                      | : Intact.             |
| No. of coolers/boxes | : 1       | Temperature                        | : 6.2°C - Ice present |
| Receipt Detail       | :         | No. of samples received / analysed | : 28 / 28             |

### General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**



## Sample Container(s)/Preservation Non-Compliances

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

- No sample container / preservation non-compliance exists.

## Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

| Laboratory sample ID | Client sampling date / time | Client sample ID | SOIL - EA055-103 Moisture Content | SOIL - P-21/1 (Meib) NEPM (2013) HIL Table 1A(1) Screen | SOIL - S-05 TRH/BTEXN/8 Metals | SOIL - S-12 OC/OP Pesticides | SOIL - S-26 8 metals/TRH/BTEXN/PAH | SOIL - S-27 TRH/BTEXN/PAH/Phenols/8 Metals |
|----------------------|-----------------------------|------------------|-----------------------------------|---------------------------------------------------------|--------------------------------|------------------------------|------------------------------------|--------------------------------------------|
| EM1814874-001        | 12-Sep-2018 00:00           | SS01-120918_034  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-002        | 12-Sep-2018 00:00           | SS02-120918_034  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-003        | 12-Sep-2018 00:00           | SS03-120918_034  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-004        | 12-Sep-2018 00:00           | SS04-120918_037  | ✓                                 |                                                         |                                |                              |                                    | ✓                                          |
| EM1814874-005        | 12-Sep-2018 00:00           | SS05-120918_037  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-006        | 12-Sep-2018 00:00           | SS06-120918_035  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-007        | 12-Sep-2018 00:00           | SS07-120918_035  | ✓                                 |                                                         |                                |                              |                                    | ✓                                          |
| EM1814874-008        | 12-Sep-2018 00:00           | SS08-120918_039  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-009        | 12-Sep-2018 00:00           | SS09-120918_039  | ✓                                 |                                                         |                                |                              | ✓                                  |                                            |
| EM1814874-010        | 12-Sep-2018 00:00           | SS10-120918_039  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-011        | 12-Sep-2018 00:00           | SS11-120918_040  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-012        | 12-Sep-2018 00:00           | SS12-120918_040  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-013        | 12-Sep-2018 00:00           | SS13-120918_040  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-014        | 12-Sep-2018 00:00           | SS14-120918_040  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-015        | 12-Sep-2018 00:00           | SS15-120918_040  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-016        | 12-Sep-2018 00:00           | SS16-120918_040  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-017        | 12-Sep-2018 00:00           | SS17-120918_040  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-018        | 12-Sep-2018 00:00           | SS18-120918_040  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-019        | 13-Sep-2018 00:00           | SS19-130918_036  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-020        | 13-Sep-2018 00:00           | SS20-130918_036  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-021        | 13-Sep-2018 00:00           | SS21-130918_036  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-022        | 13-Sep-2018 00:00           | SS22-130918_038  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-023        | 13-Sep-2018 00:00           | SS23-130918_038  | ✓                                 | ✓                                                       |                                |                              |                                    |                                            |
| EM1814874-024        | 13-Sep-2018 00:00           | SS24-130918_038  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-025        | 13-Sep-2018 00:00           | SS25-130918_038  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |
| EM1814874-026        | 13-Sep-2018 00:00           | SS26-130918_038  | ✓                                 |                                                         | ✓                              | ✓                            |                                    |                                            |

| <i>Laboratory sample ID</i> | <i>Client sampling date / time</i> | <i>Client sample ID</i> | WATER - W-12<br>OC/OP Pesticides | WATER - W-18<br>TRH(C8 - C9)/BTEXN |
|-----------------------------|------------------------------------|-------------------------|----------------------------------|------------------------------------|
| EM1814874-027               | 13-Sep-2018 00:00                  | RB01                    | ✓                                |                                    |
| EM1814874-028               | 13-Sep-2018 00:00                  | TB01                    |                                  | ✓                                  |

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

### ACCOUNTS PAYABLE (Brisbane)

- Email            ap-fss@ghd.com

Email                    ap-fss@ghd.com

- [illegible]

|                                                                |       |                   |
|----------------------------------------------------------------|-------|-------------------|
| - *AU Certificate of Analysis - NATA (COA)                     | Email | kory.auch@ghd.com |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)    | Email | kory.auch@ghd.com |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)            | Email | kory.auch@ghd.com |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | kory.auch@ghd.com |
| - A4 - AU Tax Invoice (INV)                                    | Email | kory.auch@ghd.com |
| - Chain of Custody (CoC) (COC)                                 | Email | kory.auch@ghd.com |
| - EDI Format - ENMRG (ENMRG)                                   | Email | kory.auch@ghd.com |
| - EDI Format - ESDAT (ESDAT)                                   | Email | kory.auch@ghd.com |



## QUALITY CONTROL REPORT

|                                |                                                                     |                                |                                              |
|--------------------------------|---------------------------------------------------------------------|--------------------------------|----------------------------------------------|
| <b>Work Order</b>              | <b>: EM1814874</b>                                                  | <b>Page</b>                    | : 1 of 30                                    |
| <b>Client</b>                  | <b>: GHD PTY LTD</b>                                                | <b>Laboratory</b>              | : Environmental Division Melbourne           |
| <b>Contact</b>                 | <b>: KORY AUCH</b>                                                  | <b>Contact</b>                 | : Shirley LeCornu                            |
| <b>Address</b>                 | <b>: LEVEL 8, 180 LONSDALE ST<br/>MELBOURNE VIC, AUSTRALIA 3001</b> | <b>Address</b>                 | : 4 Westall Rd Springvale VIC Australia 3171 |
| <b>Telephone</b>               | <b>: ----</b>                                                       | <b>Telephone</b>               | : +61-3-8549 9630                            |
| <b>Project</b>                 | <b>: 3136558</b>                                                    | <b>Date Samples Received</b>   | : 14-Sep-2018                                |
| <b>Order number</b>            | <b>:</b>                                                            | <b>Date Analysis Commenced</b> | : 17-Sep-2018                                |
| <b>C-O-C number</b>            | <b>: ----</b>                                                       | <b>Issue Date</b>              | : 21-Sep-2018                                |
| <b>Sampler</b>                 | <b>: ISAAC, KORY AUCH</b>                                           |                                |                                              |
| <b>Site</b>                    | <b>: Wonthaggi PSP - Preliminary Site Investigation</b>             |                                |                                              |
| <b>Quote number</b>            | <b>: ME/373/17</b>                                                  |                                |                                              |
| <b>No. of samples received</b> | <b>: 28</b>                                                         |                                |                                              |
| <b>No. of samples analysed</b> | <b>: 28</b>                                                         |                                |                                              |



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.

| <i>Signatories</i> | <i>Position</i>          | <i>Accreditation Category</i>         |
|--------------------|--------------------------|---------------------------------------|
| Dilani Fernando    | Senior Inorganic Chemist | Melbourne Inorganics, Springvale, VIC |
| Nancy Wang         | 2IC Organic Chemist      | Melbourne Inorganics, Springvale, VIC |
| Nancy Wang         | 2IC Organic Chemist      | Melbourne Organics, Springvale, VIC   |
| Xing Lin           | Senior Organic Chemist   | Melbourne Organics, Springvale, VIC   |



## 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 (%) |
| <b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 1934937)</b> |                  |                         |            |                                   |       |                 |                  |         |                     |
| EM1814873-012                                                        | Anonymous        | EA055: Moisture Content | ----       | 0.1                               | %     | 9.4             | 11.2             | 17.1    | 0% - 50%            |
| EM1814874-010                                                        | SS10-120918_039  | EA055: Moisture Content | ----       | 0.1                               | %     | 36.0            | 37.0             | 2.72    | 0% - 20%            |
| <b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 1934938)</b> |                  |                         |            |                                   |       |                 |                  |         |                     |
| EM1814874-020                                                        | SS20-130918_036  | EA055: Moisture Content | ----       | 0.1                               | %     | 4.5             | 5.3              | 17.6    | No Limit            |
| EM1814875-004                                                        | Anonymous        | EA055: Moisture Content | ----       | 0.1                               | %     | 9.9             | 11.1             | 11.5    | 0% - 50%            |
| <b>EG005T: Total Metals by ICP-AES (QC Lot: 1936393)</b>             |                  |                         |            |                                   |       |                 |                  |         |                     |
| EM1814720-002                                                        | Anonymous        | EG005T: Beryllium       | 7440-41-7  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Cadmium         | 7440-43-9  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Barium          | 7440-39-3  | 10                                | mg/kg | 10              | <10              | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Chromium        | 7440-47-3  | 2                                 | mg/kg | 17              | 17               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Cobalt          | 7440-48-4  | 2                                 | mg/kg | 26              | 26               | 0.00    | 0% - 50%            |
|                                                                      |                  | EG005T: Nickel          | 7440-02-0  | 2                                 | mg/kg | 112             | 111              | 0.00    | 0% - 20%            |
|                                                                      |                  | EG005T: Arsenic         | 7440-38-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Copper          | 7440-50-8  | 5                                 | mg/kg | 34              | 33               | 3.33    | No Limit            |
|                                                                      |                  | EG005T: Lead            | 7439-92-1  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Manganese       | 7439-96-5  | 5                                 | mg/kg | 475             | 489              | 2.92    | 0% - 20%            |
|                                                                      |                  | EG005T: Selenium        | 7782-49-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Vanadium        | 7440-62-2  | 5                                 | mg/kg | 9               | 8                | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Zinc            | 7440-66-6  | 5                                 | mg/kg | 55              | 55               | 0.00    | 0% - 50%            |
|                                                                      |                  | EG005T: Boron           | 7440-42-8  | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EM1814720-026                                                        | Anonymous        | EG005T: Beryllium       | 7440-41-7  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Cadmium         | 7440-43-9  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Barium          | 7440-39-3  | 10                                | mg/kg | 40              | 30               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Chromium        | 7440-47-3  | 2                                 | mg/kg | 13              | 15               | 9.97    | 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 (%) |
| EG005T: Total Metals by ICP-AES (QC Lot: 1936393) - continued |                  |                   |            |                                   |       |                 |                  |         |                     |
| EM1814720-026                                                 | Anonymous        | EG005T: Cobalt    | 7440-48-4  | 2                                 | mg/kg | 20              | 22               | 11.1    | 0% - 50%            |
|                                                               |                  | EG005T: Nickel    | 7440-02-0  | 2                                 | mg/kg | 86              | 93               | 7.84    | 0% - 20%            |
|                                                               |                  | EG005T: Arsenic   | 7440-38-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Copper    | 7440-50-8  | 5                                 | mg/kg | 20              | 24               | 15.4    | No Limit            |
|                                                               |                  | EG005T: Lead      | 7439-92-1  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Manganese | 7439-96-5  | 5                                 | mg/kg | 317             | 347              | 9.06    | 0% - 20%            |
|                                                               |                  | EG005T: Selenium  | 7782-49-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Vanadium  | 7440-62-2  | 5                                 | mg/kg | 12              | 12               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Zinc      | 7440-66-6  | 5                                 | mg/kg | 36              | 40               | 8.91    | No Limit            |
| EG005T: Boron                                                 | 7440-42-8        | 50                | mg/kg      | <50                               | <50   | 0.00            | No Limit         |         |                     |
| EG005T: Total Metals by ICP-AES (QC Lot: 1936395)             |                  |                   |            |                                   |       |                 |                  |         |                     |
| EM1814874-010                                                 | SS10-120918_039  | EG005T: Lead      | 7439-92-1  | 5                                 | mg/kg | 233             | 215              | 8.16    | 0% - 20%            |
| EM1814874-010                                                 | SS10-120918_039  | EG005T: Beryllium | 7440-41-7  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Cadmium   | 7440-43-9  | 1                                 | mg/kg | 2               | 3                | 0.00    | No Limit            |
|                                                               |                  | EG005T: Barium    | 7440-39-3  | 10                                | mg/kg | 140             | 150              | 0.00    | 0% - 50%            |
|                                                               |                  | EG005T: Chromium  | 7440-47-3  | 2                                 | mg/kg | 50              | 49               | 0.00    | 0% - 20%            |
|                                                               |                  | EG005T: Cobalt    | 7440-48-4  | 2                                 | mg/kg | 20              | 18               | 8.91    | 0% - 50%            |
|                                                               |                  | EG005T: Nickel    | 7440-02-0  | 2                                 | mg/kg | 53              | 51               | 4.26    | 0% - 20%            |
|                                                               |                  | EG005T: Arsenic   | 7440-38-2  | 5                                 | mg/kg | 5               | <5               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Copper    | 7440-50-8  | 5                                 | mg/kg | 169             | 172              | 1.69    | 0% - 20%            |
|                                                               |                  | EG005T: Manganese | 7439-96-5  | 5                                 | mg/kg | 458             | 429              | 6.60    | 0% - 20%            |
|                                                               |                  | EG005T: Selenium  | 7782-49-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Vanadium  | 7440-62-2  | 5                                 | mg/kg | 35              | 34               | 3.87    | No Limit            |
|                                                               |                  | EG005T: Zinc      | 7440-66-6  | 5                                 | mg/kg | 418             | 400              | 4.51    | 0% - 20%            |
|                                                               |                  | EG005T: Boron     | 7440-42-8  | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EM1814874-016                                                 | SS16-120918_040  | EG005T: Beryllium | 7440-41-7  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Cadmium   | 7440-43-9  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Barium    | 7440-39-3  | 10                                | mg/kg | 80              | 70               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Chromium  | 7440-47-3  | 2                                 | mg/kg | 20              | 19               | 6.15    | 0% - 50%            |
|                                                               |                  | EG005T: Cobalt    | 7440-48-4  | 2                                 | mg/kg | 17              | 17               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Nickel    | 7440-02-0  | 2                                 | mg/kg | 18              | 16               | 13.3    | No Limit            |
|                                                               |                  | EG005T: Arsenic   | 7440-38-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Copper    | 7440-50-8  | 5                                 | mg/kg | 16              | 15               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Lead      | 7439-92-1  | 5                                 | mg/kg | 10              | 11               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Manganese | 7439-96-5  | 5                                 | mg/kg | 302             | 273              | 10.1    | 0% - 20%            |
|                                                               |                  | EG005T: Selenium  | 7782-49-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Vanadium  | 7440-62-2  | 5                                 | mg/kg | 31              | 30               | 0.00    | No Limit            |
|                                                               |                  | EG005T: Zinc      | 7440-66-6  | 5                                 | mg/kg | 59              | 58               | 2.23    | 0% - 50%            |
| EG005T: Boron                                                 | 7440-42-8        | 50                | mg/kg      | <50                               | <50   | 0.00            | No Limit         |         |                     |
| EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1936394)   |                  |                   |            |                                   |       |                 |                  |         |                     |



| 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 (%) |
| <b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1936394) - continued</b>        |                  |                                        |            |                                   |       |                 |                  |         |                     |
| EM1814720-002                                                                         | Anonymous        | EG035T: Mercury                        | 7439-97-6  | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EM1814720-026                                                                         | Anonymous        | EG035T: Mercury                        | 7439-97-6  | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| <b>EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1936396)</b>                    |                  |                                        |            |                                   |       |                 |                  |         |                     |
| EM1814874-010                                                                         | SS10-120918_039  | EG035T: Mercury                        | 7439-97-6  | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EM1814874-016                                                                         | SS16-120918_040  | EG035T: Mercury                        | 7439-97-6  | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| <b>EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 1935326)</b>                 |                  |                                        |            |                                   |       |                 |                  |         |                     |
| EM1814777-002                                                                         | Anonymous        | EG048G: Hexavalent Chromium            | 18540-29-9 | 0.5                               | mg/kg | <0.8            | <0.8             | 0.00    | No Limit            |
| EM1814873-009                                                                         | Anonymous        | EG048G: Hexavalent Chromium            | 18540-29-9 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| <b>EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QC Lot: 1936660)</b> |                  |                                        |            |                                   |       |                 |                  |         |                     |
| EM1814874-023                                                                         | SS23-130918_038  | EK028SF: Weak Acid Dissociable Cyanide | ----       | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EM1814871-001                                                                         | Anonymous        | EK028SF: Weak Acid Dissociable Cyanide | ----       | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| <b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 1935212)</b>                       |                  |                                        |            |                                   |       |                 |                  |         |                     |
| EM1814874-003                                                                         | SS03-120918_034  | EP066: Total Polychlorinated biphenyls | ----       | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| <b>EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 1935374)</b>                       |                  |                                        |            |                                   |       |                 |                  |         |                     |
| EM1814838-001                                                                         | Anonymous        | EP066: Total Polychlorinated biphenyls | ----       | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| <b>EP068A: Organochlorine Pesticides (OC) (QC Lot: 1935211)</b>                       |                  |                                        |            |                                   |       |                 |                  |         |                     |
| EM1814874-012                                                                         | SS12-120918_040  | EP068: alpha-BHC                       | 319-84-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Hexachlorobenzene (HCB)         | 118-74-1   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: beta-BHC                        | 319-85-7   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: gamma-BHC                       | 58-89-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: delta-BHC                       | 319-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Heptachlor                      | 76-44-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Aldrin                          | 309-00-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Heptachlor epoxide              | 1024-57-3  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: trans-Chlordane                 | 5103-74-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: alpha-Endosulfan                | 959-98-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: cis-Chlordane                   | 5103-71-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Dieldrin                        | 60-57-1    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: 4,4'-DDE                        | 72-55-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Endrin                          | 72-20-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: beta-Endosulfan                 | 33213-65-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: 4,4'-DDD                        | 72-54-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Endrin aldehyde                 | 7421-93-4  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Endosulfan sulfate              | 1031-07-8  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Endrin ketone                   | 53494-70-5 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Mirex                           | 2385-85-5  | 0.05                              | mg/kg | <0.20           | <0.20            | 0.00    | No Limit            |
|                                                                                       |                  | EP068: 4,4'-DDT                        | 50-29-3    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                                       |                  | EP068: Methoxychlor                    | 72-43-5    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EM1814874-003                                                                         | SS03-120918_034  | EP068: alpha-BHC                       | 319-84-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 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 (%) |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 1935211) - continued |                  |                                |            |                                   |       |                 |                  |         |                     |
| EM1814874-003                                                        | SS03-120918_034  | EP068: Hexachlorobenzene (HCB) | 118-74-1   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-BHC                | 319-85-7   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: gamma-BHC               | 58-89-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: delta-BHC               | 319-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor              | 76-44-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Aldrin                  | 309-00-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor epoxide      | 1024-57-3  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: trans-Chlordane         | 5103-74-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: alpha-Endosulfan        | 959-98-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: cis-Chlordane           | 5103-71-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dieldrin                | 60-57-1    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4.4`-DDE                | 72-55-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin                  | 72-20-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-Endosulfan         | 33213-65-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4.4`-DDD                | 72-54-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin aldehyde         | 7421-93-4  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endosulfan sulfate      | 1031-07-8  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin ketone           | 53494-70-5 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Mirex                   | 2385-85-5  | 0.05                              | mg/kg | <0.20           | <0.20            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4.4`-DDT                | 50-29-3    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Methoxychlor            | 72-43-5    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 1935377)             |                  |                                |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                        | Anonymous        | EP068: alpha-BHC               | 319-84-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Hexachlorobenzene (HCB) | 118-74-1   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-BHC                | 319-85-7   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: gamma-BHC               | 58-89-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: delta-BHC               | 319-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor              | 76-44-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Aldrin                  | 309-00-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor epoxide      | 1024-57-3  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: trans-Chlordane         | 5103-74-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: alpha-Endosulfan        | 959-98-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: cis-Chlordane           | 5103-71-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dieldrin                | 60-57-1    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4.4`-DDE                | 72-55-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin                  | 72-20-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-Endosulfan         | 33213-65-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4.4`-DDD                | 72-54-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin aldehyde         | 7421-93-4  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endosulfan sulfate      | 1031-07-8  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |



| Sub-Matrix: SOIL                                                     |                  |                                |            | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|----------------------------------------------------------------------|------------------|--------------------------------|------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                                 | Client sample ID | Method: Compound               | CAS Number | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 1935377) - continued |                  |                                |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                        | Anonymous        | EP068: Endrin ketone           | 53494-70-5 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Mirex                   | 2385-85-5  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4`-DDT                | 50-29-3    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Methoxychlor            | 72-43-5    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EM1814838-001                                                        | Anonymous        | EP068: alpha-BHC               | 319-84-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Hexachlorobenzene (HCB) | 118-74-1   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-BHC                | 319-85-7   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: gamma-BHC               | 58-89-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: delta-BHC               | 319-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor              | 76-44-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Aldrin                  | 309-00-2   | 0.05                              | mg/kg | 0.06            | 0.07             | 19.1    | No Limit            |
|                                                                      |                  | EP068: Heptachlor epoxide      | 1024-57-3  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: trans-Chlordane         | 5103-74-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: alpha-Endosulfan        | 959-98-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: cis-Chlordane           | 5103-71-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dieldrin                | 60-57-1    | 0.05                              | mg/kg | 0.36            | 0.43             | 19.5    | No Limit            |
|                                                                      |                  | EP068: 4,4`-DDE                | 72-55-9    | 0.05                              | mg/kg | 0.14            | 0.14             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin                  | 72-20-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-Endosulfan         | 33213-65-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4`-DDD                | 72-54-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin aldehyde         | 7421-93-4  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endosulfan sulfate      | 1031-07-8  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin ketone           | 53494-70-5 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Mirex                   | 2385-85-5  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4`-DDT                | 50-29-3    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Methoxychlor            | 72-43-5    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EP068B: Organophosphorus Pesticides (OP) (QC Lot: 1935211)           |                  |                                |            |                                   |       |                 |                  |         |                     |
| EM1814874-012                                                        | SS12-120918_040  | EP068: Dichlorvos              | 62-73-7    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Demeton-S-methyl        | 919-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dimethoate              | 60-51-5    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Diazinon                | 333-41-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos-methyl     | 5598-13-0  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Malathion               | 121-75-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenthion                | 55-38-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos            | 2921-88-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Pirimphos-ethyl         | 23505-41-1 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorfenvinphos         | 470-90-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Bromophos-ethyl         | 4824-78-6  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenamiphos              | 22224-92-6 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Prothiofos              | 34643-46-4 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |



| Sub-Matrix: SOIL                                                       |                  |                                                            |            | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|------------------------------------------------------------------------|------------------|------------------------------------------------------------|------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                                   | Client sample ID | Method: Compound                                           | CAS Number | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP068B: Organophosphorus Pesticides (OP) (QC Lot: 1935211) - continued |                  |                                                            |            |                                   |       |                 |                  |         |                     |
| EM1814874-012                                                          | SS12-120918_040  | EP068: Ethion                                              | 563-12-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Carbophenothion                                     | 786-19-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Azinphos Methyl                                     | 86-50-0    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Monocrotophos                                       | 6923-22-4  | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion-methyl                                    | 298-00-0   | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion                                           | 56-38-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EM1814874-003                                                          | SS03-120918_034  | EP068: Dichlorvos                                          | 62-73-7    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Demeton-S-methyl                                    | 919-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Dimethoate                                          | 60-51-5    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Diazinon                                            | 333-41-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorpyrifos-methyl                                 | 5598-13-0  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Malathion                                           | 121-75-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Fenthion                                            | 55-38-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorpyrifos                                        | 2921-88-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Pirimphos-ethyl                                     | 23505-41-1 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorfenvinphos                                     | 470-90-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Bromophos-ethyl                                     | 4824-78-6  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Fenamiphos                                          | 22224-92-6 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Prothiofos                                          | 34643-46-4 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Ethion                                              | 563-12-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Carbophenothion                                     | 786-19-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Azinphos Methyl                                     | 86-50-0    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Monocrotophos                                       | 6923-22-4  | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion-methyl                                    | 298-00-0   | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion                                           | 56-38-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068B: Organophosphorus Pesticides (OP) (QC Lot: 1935377) |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                          | Anonymous        | EP068: Dichlorvos                                          | 62-73-7    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Demeton-S-methyl                                    | 919-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Dimethoate                                          | 60-51-5    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Diazinon                                            | 333-41-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorpyrifos-methyl                                 | 5598-13-0  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Malathion                                           | 121-75-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Fenthion                                            | 55-38-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorpyrifos                                        | 2921-88-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Pirimphos-ethyl                                     | 23505-41-1 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorfenvinphos                                     | 470-90-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Bromophos-ethyl                                     | 4824-78-6  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Fenamiphos                                          | 22224-92-6 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Prothiofos                                          | 34643-46-4 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Ethion                                              | 563-12-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |



| Sub-Matrix: SOIL                                                       |                  |                                     |            | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|------------------------------------------------------------------------|------------------|-------------------------------------|------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                                   | Client sample ID | Method: Compound                    | CAS Number | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP068B: Organophosphorus Pesticides (OP) (QC Lot: 1935377) - continued |                  |                                     |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                          | Anonymous        | EP068: Carbophenothion              | 786-19-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Azinphos Methyl              | 86-50-0    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Monocrotophos                | 6923-22-4  | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion-methyl             | 298-00-0   | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion                    | 56-38-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EM1814838-001                                                          | Anonymous        | EP068: Dichlorvos                   | 62-73-7    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Demeton-S-methyl             | 919-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Dimethoate                   | 60-51-5    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Diazinon                     | 333-41-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorpyrifos-methyl          | 5598-13-0  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Malathion                    | 121-75-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Fenthion                     | 55-38-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorpyrifos                 | 2921-88-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Pirimphos-ethyl              | 23505-41-1 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Chlorfenvinphos              | 470-90-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Bromophos-ethyl              | 4824-78-6  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Fenamiphos                   | 22224-92-6 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Prothiofos                   | 34643-46-4 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Ethion                       | 563-12-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Carbophenothion              | 786-19-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Azinphos Methyl              | 86-50-0    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                        |                  | EP068: Monocrotophos                | 6923-22-4  | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion-methyl             | 298-00-0   | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068: Parathion                    | 56-38-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                        |                  | EP068C: Triazines (QC Lot: 1935211) |            |                                   |       |                 |                  |         |                     |
| EM1814874-012                                                          | SS12-120918_040  | EP068: Atrazine                     | 1912-24-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EM1814874-003                                                          | SS03-120918_034  | EP068: Atrazine                     | 1912-24-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EP068C: Triazines (QC Lot: 1935377)                                    |                  |                                     |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                          | Anonymous        | EP068: Atrazine                     | 1912-24-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EM1814838-001                                                          | Anonymous        | EP068: Atrazine                     | 1912-24-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EP068D: Pyrethroids (QC Lot: 1935211)                                  |                  |                                     |            |                                   |       |                 |                  |         |                     |
| EM1814874-012                                                          | SS12-120918_040  | EP068: Bifenthrin                   | 82657-04-3 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EM1814874-003                                                          | SS03-120918_034  | EP068: Bifenthrin                   | 82657-04-3 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EP068D: Pyrethroids (QC Lot: 1935377)                                  |                  |                                     |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                          | Anonymous        | EP068: Bifenthrin                   | 82657-04-3 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EM1814838-001                                                          | Anonymous        | EP068: Bifenthrin                   | 82657-04-3 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EP075(SIM)A: Phenolic Compounds (QC Lot: 1935213)                      |                  |                                     |            |                                   |       |                 |                  |         |                     |
| EM1814874-003                                                          | SS03-120918_034  | EP075(SIM): Phenol                  | 108-95-2   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                        |                  | EP075(SIM): 2-Chlorophenol          | 95-57-8    | 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)A: Phenolic Compounds (QC Lot: 1935213) - continued    |                  |                                     |            |                                   |          |                 |                  |         |                     |      |          |
| EM1814874-003                                                    | SS03-120918_034  | EP075(SIM): 2-Methylphenol          | 95-48-7    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2-Nitrophenol           | 88-75-5    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4-Dimethylphenol      | 105-67-9   | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4-Dichlorophenol      | 120-83-2   | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,6-Dichlorophenol      | 87-65-0    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4,6-Trichlorophenol   | 88-06-2    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4,5-Trichlorophenol   | 95-95-4    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 3- & 4-Methylphenol     | 1319-77-3  | 1                                 | mg/kg    | <1              | <1               | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): Pentachlorophenol       | 87-86-5    | 2                                 | mg/kg    | <2              | <2               | 0.00    | No Limit            |      |          |
| EP075(SIM)A: Phenolic Compounds (QC Lot: 1935376)                |                  |                                     |            |                                   |          |                 |                  |         |                     |      |          |
| EM1814838-043                                                    | Anonymous        | EP075(SIM): Phenol                  | 108-95-2   | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2-Chlorophenol          | 95-57-8    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2-Methylphenol          | 95-48-7    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2-Nitrophenol           | 88-75-5    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4-Dimethylphenol      | 105-67-9   | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4-Dichlorophenol      | 120-83-2   | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,6-Dichlorophenol      | 87-65-0    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4,6-Trichlorophenol   | 88-06-2    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 2,4,5-Trichlorophenol   | 95-95-4    | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                  |                  | EP075(SIM): 3- & 4-Methylphenol     | 1319-77-3  | 1                                 | mg/kg    | <1              | <1               | 0.00    | No Limit            |      |          |
|                                                                  |                  |                                     |            | EP075(SIM): Pentachlorophenol     | 87-86-5  | 2               | mg/kg            | <2      | <2                  | 0.00 | No Limit |
|                                                                  |                  | EM1814838-001                       | Anonymous  | EP075(SIM): Phenol                | 108-95-2 | 0.5             | mg/kg            | <0.5    | <0.5                | 0.00 | No Limit |
| EP075(SIM): 2-Chlorophenol                                       | 95-57-8          |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 2-Methylphenol                                       | 95-48-7          |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 2-Nitrophenol                                        | 88-75-5          |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 2,4-Dimethylphenol                                   | 105-67-9         |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 2,4-Dichlorophenol                                   | 120-83-2         |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 2,6-Dichlorophenol                                   | 87-65-0          |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 4-Chloro-3-methylphenol                              | 59-50-7          |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 2,4,6-Trichlorophenol                                | 88-06-2          |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 2,4,5-Trichlorophenol                                | 95-95-4          |                                     |            | 0.5                               | mg/kg    | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP075(SIM): 3- & 4-Methylphenol                                  | 1319-77-3        |                                     |            | 1                                 | mg/kg    | <1              | <1               | 0.00    | No Limit            |      |          |
|                                                                  |                  |                                     |            | EP075(SIM): Pentachlorophenol     | 87-86-5  | 2               | mg/kg            | <2      | <2                  | 0.00 | No Limit |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1935213) |                  |                                     |            |                                   |          |                 |                  |         |                     |      |          |
| EM1814874-003                                                    | SS03-120918_034  | 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            |      |          |



| 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: 1935213) - continued |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814874-003                                                                | SS03-120918_034  | 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   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                              |                  |                                    | 205-82-3   |                                   |       |                 |                  |         |                     |
|                                                                              |                  | 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)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1935376)             |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                                | 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   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                              |                  |                                    | 205-82-3   |                                   |       |                 |                  |         |                     |
|                                                                              |                  | 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            |
| EM1814838-001                                                                | 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 | 1.2             | 0.5              | 78.1    | 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 | 4.6             | 1.8              | 89.1    | No Limit            |
|                                                                              |                  | EP075(SIM): Pyrene                 | 129-00-0   | 0.5                               | mg/kg | 4.7             | 2.0              | 81.3    | No Limit            |
|                                                                              |                  | EP075(SIM): Benz(a)anthracene      | 56-55-3    | 0.5                               | mg/kg | 2.5             | 1.1              | 79.8    | 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: 1935376) - continued      |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814838-001                                                                     | Anonymous        | EP075(SIM): Chrysene               | 218-01-9   | 0.5                               | mg/kg | 2.5             | 1.1              | 78.4    | No Limit            |
|                                                                                   |                  | EP075(SIM): Benzo(b+j)fluoranthene | 205-99-2   | 0.5                               | mg/kg | 3.4             | 1.6              | 72.4    | No Limit            |
|                                                                                   |                  |                                    | 205-82-3   |                                   |       |                 |                  |         |                     |
|                                                                                   |                  | EP075(SIM): Benzo(k)fluoranthene   | 207-08-9   | 0.5                               | mg/kg | 1.1             | 0.6              | 63.6    | No Limit            |
|                                                                                   |                  | EP075(SIM): Benzo(a)pyrene         | 50-32-8    | 0.5                               | mg/kg | 2.6             | 1.3              | 66.4    | No Limit            |
|                                                                                   |                  | EP075(SIM): Indeno(1.2.3.cd)pyrene | 193-39-5   | 0.5                               | mg/kg | 1.5             | 0.8              | 59.1    | 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 | 1.7             | 1.0              | 50.2    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1935129)                         |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814874-001                                                                     | SS01-120918_034  | EP080: C6 - C9 Fraction            | ----       | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1814874-011                                                                     | SS11-120918_040  | EP080: C6 - C9 Fraction            | ----       | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1935132)                         |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814874-021                                                                     | SS21-130918_036  | EP080: C6 - C9 Fraction            | ----       | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1814876-011                                                                     | Anonymous        | EP080: C6 - C9 Fraction            | ----       | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1935210)                         |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814874-012                                                                     | SS12-120918_040  | EP071: C15 - C28 Fraction          | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction          | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction          | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C36 Fraction (sum)    | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EM1814874-003                                                                     | SS03-120918_034  | EP071: C15 - C28 Fraction          | ----       | 100                               | mg/kg | 220             | 190              | 17.2    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction          | ----       | 100                               | mg/kg | 110             | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction          | ----       | 50                                | mg/kg | 50              | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C36 Fraction (sum)    | ----       | 50                                | mg/kg | 380             | 190              | 66.7    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1935375)                         |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                                     | Anonymous        | EP071: C15 - C28 Fraction          | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction          | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction          | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C36 Fraction (sum)    | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EM1814838-001                                                                     | Anonymous        | EP071: C15 - C28 Fraction          | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction          | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction          | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C36 Fraction (sum)    | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1935129) |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814874-001                                                                     | SS01-120918_034  | EP080: C6 - C10 Fraction           | C6_C10     | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1814874-011                                                                     | SS11-120918_040  | EP080: C6 - C10 Fraction           | C6_C10     | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1935132) |                  |                                    |            |                                   |       |                 |                  |         |                     |
| EM1814874-021                                                                     | SS21-130918_036  | EP080: C6 - C10 Fraction           | C6_C10     | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1814876-011                                                                     | Anonymous        | EP080: C6 - C10 Fraction           | C6_C10     | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1935210) |                  |                                    |            |                                   |       |                 |                  |         |                     |



| Sub-Matrix: SOIL                                                                              |                  |                                  |            | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|-----------------------------------------------------------------------------------------------|------------------|----------------------------------|------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                                                          | Client sample ID | Method: Compound                 | CAS Number | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1935210) - continued |                  |                                  |            |                                   |       |                 |                  |         |                     |
| EM1814874-012                                                                                 | SS12-120918_040  | EP071: >C16 - C34 Fraction       | ----       | 100                               | mg/kg | 110             | 110              | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C34 - C40 Fraction       | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C16 Fraction       | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C40 Fraction (sum) | ----       | 50                                | mg/kg | 110             | 110              | 0.00    | No Limit            |
| EM1814874-003                                                                                 | SS03-120918_034  | EP071: >C16 - C34 Fraction       | ----       | 100                               | mg/kg | 270             | 240              | 13.1    | No Limit            |
|                                                                                               |                  | EP071: >C34 - C40 Fraction       | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C16 Fraction       | ----       | 50                                | mg/kg | 80              | 60               | 30.8    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C40 Fraction (sum) | ----       | 50                                | mg/kg | 350             | 300              | 15.4    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1935375)             |                  |                                  |            |                                   |       |                 |                  |         |                     |
| EM1814838-043                                                                                 | Anonymous        | EP071: >C16 - C34 Fraction       | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C34 - C40 Fraction       | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C16 Fraction       | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C40 Fraction (sum) | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EM1814838-001                                                                                 | Anonymous        | EP071: >C16 - C34 Fraction       | ----       | 100                               | mg/kg | 150             | <100             | 38.2    | No Limit            |
|                                                                                               |                  | EP071: >C34 - C40 Fraction       | ----       | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C16 Fraction       | ----       | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C40 Fraction (sum) | ----       | 50                                | mg/kg | 150             | <50              | 100     | No Limit            |
| EP080: BTEXN (QC Lot: 1935129)                                                                |                  |                                  |            |                                   |       |                 |                  |         |                     |
| EM1814874-001                                                                                 | SS01-120918_034  | EP080: Benzene                   | 71-43-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Toluene                   | 108-88-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Ethylbenzene              | 100-41-4   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: meta- & para-Xylene       | 108-38-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  |                                  | 106-42-3   |                                   |       |                 |                  |         |                     |
|                                                                                               |                  | EP080: ortho-Xylene              | 95-47-6    | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| EM1814874-011                                                                                 | SS11-120918_040  | EP080: Naphthalene               | 91-20-3    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Benzene                   | 71-43-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Toluene                   | 108-88-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Ethylbenzene              | 100-41-4   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: meta- & para-Xylene       | 108-38-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  |                                  | 106-42-3   |                                   |       |                 |                  |         |                     |
|                                                                                               |                  | EP080: ortho-Xylene              | 95-47-6    | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Naphthalene               | 91-20-3    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EP080: BTEXN (QC Lot: 1935132)                                                                |                  |                                  |            |                                   |       |                 |                  |         |                     |
| EM1814874-021                                                                                 | SS21-130918_036  | EP080: Benzene                   | 71-43-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Toluene                   | 108-88-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Ethylbenzene              | 100-41-4   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: meta- & para-Xylene       | 108-38-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  |                                  | 106-42-3   |                                   |       |                 |                  |         |                     |
|                                                                                               |                  | EP080: ortho-Xylene              | 95-47-6    | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Naphthalene               | 91-20-3    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |



Page : 13 of 30  
 Work Order : EM1814874  
 Client : GHD PTY LTD  
 Project : 3136558



| Sub-Matrix: <b>SOIL</b>                                     |                  |                                |                      | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|-------------------------------------------------------------|------------------|--------------------------------|----------------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                        | Client sample ID | Method: Compound               | CAS Number           | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP080: BTEXN (QC Lot: 1935132) - continued                  |                  |                                |                      |                                   |       |                 |                  |         |                     |
| EM1814876-011                                               | Anonymous        | EP080: Benzene                 | 71-43-2              | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                             |                  | EP080: Toluene                 | 108-88-3             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP080: Ethylbenzene            | 100-41-4             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP080: meta- & para-Xylene     | 108-38-3<br>106-42-3 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP080: ortho-Xylene            | 95-47-6              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP080: Naphthalene             | 91-20-3              | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| Sub-Matrix: <b>WATER</b>                                    |                  |                                |                      | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
| Laboratory sample ID                                        | Client sample ID | Method: Compound               | CAS Number           | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EG020T: Total Metals by ICP-MS (QC Lot: 1940781)            |                  |                                |                      |                                   |       |                 |                  |         |                     |
| EM1815018-001                                               | Anonymous        | EG020A-T: Cadmium              | 7440-43-9            | 0.0001                            | mg/L  | 0.0011          | 0.0011           | 0.00    | 0% - 50%            |
|                                                             |                  | 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  | 0.008           | 0.007            | 0.00    | No Limit            |
|                                                             |                  | EG020A-T: Lead                 | 7439-92-1            | 0.001                             | mg/L  | 0.002           | 0.002            | 0.00    | No Limit            |
|                                                             |                  | EG020A-T: Nickel               | 7440-02-0            | 0.001                             | mg/L  | 0.255           | 0.246            | 3.60    | 0% - 20%            |
|                                                             |                  | EG020A-T: Zinc                 | 7440-66-6            | 0.005                             | mg/L  | 0.388           | 0.361            | 7.28    | 0% - 20%            |
| EM1814833-002                                               | 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  | <0.001          | <0.001           | 0.00    | No Limit            |
|                                                             |                  | 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  | <0.005          | <0.005           | 0.00    | No Limit            |
| EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1937453) |                  |                                |                      |                                   |       |                 |                  |         |                     |
| EM1814662-001                                               | Anonymous        | EG035T: Mercury                | 7439-97-6            | 0.0001                            | mg/L  | <0.0001         | <0.0001          | 0.00    | No Limit            |
| EM1814764-006                                               | Anonymous        | EG035T: Mercury                | 7439-97-6            | 0.0001                            | mg/L  | <0.0001         | <0.0001          | 0.00    | No Limit            |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 1935115)    |                  |                                |                      |                                   |       |                 |                  |         |                     |
| EM1814874-027                                               | RB01             | EP068: alpha-BHC               | 319-84-6             | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: Hexachlorobenzene (HCB) | 118-74-1             | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: beta-BHC                | 319-85-7             | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: gamma-BHC               | 58-89-9              | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: delta-BHC               | 319-86-8             | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: Heptachlor              | 76-44-8              | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: Aldrin                  | 309-00-2             | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: Heptachlor epoxide      | 1024-57-3            | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: trans-Chlordane         | 5103-74-2            | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: alpha-Endosulfan        | 959-98-8             | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: cis-Chlordane           | 5103-71-9            | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                             |                  | EP068: Dieldrin                | 60-57-1              | 0.5                               | µg/L  | <0.5            | <0.5             | 0.00    | No Limit            |



Sub-Matrix: **WATER**

| Sub-Matrix: WATER                                                    |                  |                                     |            | Laboratory Duplicate (DUP) Report |      |                 |                  |         |                     |
|----------------------------------------------------------------------|------------------|-------------------------------------|------------|-----------------------------------|------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                                 | Client sample ID | Method: Compound                    | CAS Number | LOR                               | Unit | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 1935115) - continued |                  |                                     |            |                                   |      |                 |                  |         |                     |
| EM1814874-027                                                        | RB01             | EP068: 4.4`-DDE                     | 72-55-9    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin                       | 72-20-8    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-Endosulfan              | 33213-65-9 | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4.4`-DDD                     | 72-54-8    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin aldehyde              | 7421-93-4  | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endosulfan sulfate           | 1031-07-8  | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin ketone                | 53494-70-5 | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4.4`-DDT                     | 50-29-3    | 2                                 | µg/L | <2.0            | <2.0             | 0.00    | No Limit            |
| EP068: Methoxychlor                                                  | 72-43-5          | 2                                   | µg/L       | <2.0                              | <2.0 | 0.00            | No Limit         |         |                     |
| EP068B: Organophosphorus Pesticides (OP) (QC Lot: 1935115)           |                  |                                     |            |                                   |      |                 |                  |         |                     |
| EM1814874-027                                                        | RB01             | EP068: Dichlorvos                   | 62-73-7    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Demeton-S-methyl             | 919-86-8   | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dimethoate                   | 60-51-5    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Diazinon                     | 333-41-5   | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos-methyl          | 5598-13-0  | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Malathion                    | 121-75-5   | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenthion                     | 55-38-9    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos                 | 2921-88-2  | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Pirimphos-ethyl              | 23505-41-1 | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorfenvinphos              | 470-90-6   | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Bromophos-ethyl              | 4824-78-6  | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenamiphos                   | 22224-92-6 | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Prothiofos                   | 34643-46-4 | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Ethion                       | 563-12-2   | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Carbophenothion              | 786-19-6   | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Azinphos Methyl              | 86-50-0    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Monocrotophos                | 6923-22-4  | 2                                 | µg/L | <2.0            | <2.0             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Parathion-methyl             | 298-00-0   | 2                                 | µg/L | <2.0            | <2.0             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Parathion                    | 56-38-2    | 2                                 | µg/L | <2.0            | <2.0             | 0.00    | No Limit            |
| EP075(SIM)A: Phenolic Compounds (QC Lot: 1935114)                    |                  |                                     |            |                                   |      |                 |                  |         |                     |
| EM1814874-027                                                        | RB01             | EP075(SIM): Phenol                  | 108-95-2   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2-Chlorophenol          | 95-57-8    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2-Methylphenol          | 95-48-7    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2-Nitrophenol           | 88-75-5    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2.4-Dimethylphenol      | 105-67-9   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2.4-Dichlorophenol      | 120-83-2   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2.6-Dichlorophenol      | 87-65-0    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2.4.6-Trichlorophenol   | 88-06-2    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  | EP075(SIM): 2.4.5-Trichlorophenol   | 95-95-4    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                      |                  |                                     |            |                                   |      |                 |                  |         |                     |

Page : 15 of 30  
 Work Order : EM1814874  
 Client : GHD PTY LTD  
 Project : 3136558



Sub-Matrix: **WATER**

| Sub-Matrix: WATER                                                                 |                  |                                    |            | 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)A: Phenolic Compounds (QC Lot: 1935114) - continued                     |                  |                                    |            |                                   |      |                 |                  |         |                     |
| EM1814874-027                                                                     | RB01             | EP075(SIM): 3- & 4-Methylphenol    | 1319-77-3  | 2                                 | µg/L | <2.0            | <2.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Pentachlorophenol      | 87-86-5    | 2                                 | µg/L | <2.0            | <2.0             | 0.00    | No Limit            |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 1935114)                  |                  |                                    |            |                                   |      |                 |                  |         |                     |
| EM1814874-027                                                                     | RB01             | EP075(SIM): Benzo(a)pyrene         | 50-32-8    | 0.5                               | µg/L | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Naphthalene            | 91-20-3    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Acenaphthylene         | 208-96-8   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Acenaphthene           | 83-32-9    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Fluorene               | 86-73-7    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Phenanthrene           | 85-01-8    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Anthracene             | 120-12-7   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Fluoranthene           | 206-44-0   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Pyrene                 | 129-00-0   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Benz(a)anthracene      | 56-55-3    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Chrysene               | 218-01-9   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Benzo(b+j)fluoranthene | 205-99-2   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  |                                    | 205-82-3   |                                   |      |                 |                  |         |                     |
|                                                                                   |                  | EP075(SIM): Benzo(k)fluoranthene   | 207-08-9   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Indeno(1.2.3.cd)pyrene | 193-39-5   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Dibenz(a,h)anthracene  | 53-70-3    | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
|                                                                                   |                  | EP075(SIM): Benzo(g,h,i)perylene   | 191-24-2   | 1                                 | µg/L | <1.0            | <1.0             | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1935113)                         |                  |                                    |            |                                   |      |                 |                  |         |                     |
| EM1814874-027                                                                     | RB01             | EP071: C15 - C28 Fraction          | ----       | 100                               | µg/L | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction          | ----       | 50                                | µg/L | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction          | ----       | 50                                | µg/L | <50             | <50              | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1935913)                         |                  |                                    |            |                                   |      |                 |                  |         |                     |
| EM1814889-001                                                                     | Anonymous        | EP080: C6 - C9 Fraction            | ----       | 20                                | µg/L | <20             | <20              | 0.00    | No Limit            |
| EM1814892-004                                                                     | Anonymous        | EP080: C6 - C9 Fraction            | ----       | 20                                | µg/L | 200             | 190              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1935113) |                  |                                    |            |                                   |      |                 |                  |         |                     |
| EM1814874-027                                                                     | RB01             | EP071: >C10 - C16 Fraction         | ----       | 100                               | µg/L | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: >C16 - C34 Fraction         | ----       | 100                               | µg/L | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: >C34 - C40 Fraction         | ----       | 100                               | µg/L | <100            | <100             | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 1935913) |                  |                                    |            |                                   |      |                 |                  |         |                     |
| EM1814889-001                                                                     | Anonymous        | EP080: C6 - C10 Fraction           | C6_C10     | 20                                | µg/L | <20             | <20              | 0.00    | No Limit            |
| EM1814892-004                                                                     | Anonymous        | EP080: C6 - C10 Fraction           | C6_C10     | 20                                | µg/L | 210             | 200              | 0.00    | 0% - 50%            |
| EP080: BTEXN (QC Lot: 1935913)                                                    |                  |                                    |            |                                   |      |                 |                  |         |                     |
| EM1814889-001                                                                     | Anonymous        | EP080: Benzene                     | 71-43-2    | 1                                 | µg/L | <1              | <1               | 0.00    | No Limit            |
|                                                                                   |                  | EP080: Toluene                     | 108-88-3   | 2                                 | µg/L | <2              | <2               | 0.00    | No Limit            |
|                                                                                   |                  | EP080: Ethylbenzene                | 100-41-4   | 2                                 | µg/L | <2              | <2               | 0.00    | No Limit            |

Page : 16 of 30  
 Work Order : EM1814874  
 Client : GHD PTY LTD  
 Project : 3136558



Sub-Matrix: **WATER**

|                                                   |                  |                            |            | Laboratory Duplicate (DUP) Report |      |                 |                  |         |                     |
|---------------------------------------------------|------------------|----------------------------|------------|-----------------------------------|------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                              | Client sample ID | Method: Compound           | CAS Number | LOR                               | Unit | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| <b>EP080: BTEXN (QC Lot: 1935913) - continued</b> |                  |                            |            |                                   |      |                 |                  |         |                     |
| EM1814889-001                                     | Anonymous        | EP080: meta- & para-Xylene | 108-38-3   | 2                                 | µg/L | <2              | <2               | 0.00    | No Limit            |
|                                                   |                  |                            | 106-42-3   |                                   |      |                 |                  |         |                     |
|                                                   |                  | EP080: ortho-Xylene        | 95-47-6    | 2                                 | µg/L | <2              | <2               | 0.00    | No Limit            |
|                                                   |                  | EP080: Naphthalene         | 91-20-3    | 5                                 | µg/L | <5              | <5               | 0.00    | No Limit            |
| EM1814892-004                                     | Anonymous        | EP080: Benzene             | 71-43-2    | 1                                 | µg/L | 3               | 3                | 0.00    | No Limit            |
|                                                   |                  | EP080: Toluene             | 108-88-3   | 2                                 | µg/L | <2              | <2               | 0.00    | No Limit            |
|                                                   |                  | EP080: Ethylbenzene        | 100-41-4   | 2                                 | µg/L | 9               | 9                | 0.00    | No Limit            |
|                                                   |                  | EP080: meta- & para-Xylene | 108-38-3   | 2                                 | µg/L | 3               | 3                | 0.00    | No Limit            |
|                                                   |                  |                            | 106-42-3   |                                   |      |                 |                  |         |                     |
|                                                   |                  | EP080: ortho-Xylene        | 95-47-6    | 2                                 | µg/L | <2              | <2               | 0.00    | No Limit            |
|                                                   |                  | EP080: Naphthalene         | 91-20-3    | 5                                 | µg/L | 27              | 28               | 6.10    | No Limit            |



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.

**Method Blank (MB)**  
**Report**

| Sub-Matrix: SOIL                                              |            |     |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |     |
|---------------------------------------------------------------|------------|-----|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|-----|
|                                                               |            |     |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |     |
| Method: Compound                                              | CAS Number | LOR | Unit  | Result                      |                                       |                           |                                 |     |
| EG005T: Total Metals by ICP-AES (QCLot: 1936393)              |            |     |       |                             |                                       |                           |                                 |     |
| EG005T: Arsenic                                               | 7440-38-2  | 5   | mg/kg | <5                          | 21.7 mg/kg                            | 91.2                      | 78                              | 107 |
| EG005T: Barium                                                | 7440-39-3  | 10  | mg/kg | <10                         | 143 mg/kg                             | 84.5                      | 76                              | 110 |
| EG005T: Beryllium                                             | 7440-41-7  | 1   | mg/kg | <1                          | 5.63 mg/kg                            | 97.7                      | 84                              | 113 |
| EG005T: Boron                                                 | 7440-42-8  | 50  | mg/kg | <50                         | 33.2 mg/kg                            | 104                       | 84                              | 126 |
| EG005T: Cadmium                                               | 7440-43-9  | 1   | mg/kg | <1                          | 4.64 mg/kg                            | 86.7                      | 76                              | 108 |
| EG005T: Chromium                                              | 7440-47-3  | 2   | mg/kg | <2                          | 43.9 mg/kg                            | 92.7                      | 78                              | 110 |
| EG005T: Cobalt                                                | 7440-48-4  | 2   | mg/kg | <2                          | 16 mg/kg                              | 92.5                      | 78                              | 112 |
| EG005T: Copper                                                | 7440-50-8  | 5   | mg/kg | <5                          | 32 mg/kg                              | 89.1                      | 78                              | 108 |
| EG005T: Lead                                                  | 7439-92-1  | 5   | mg/kg | <5                          | 40 mg/kg                              | 88.6                      | 78                              | 106 |
| EG005T: Manganese                                             | 7439-96-5  | 5   | mg/kg | <5                          | 130 mg/kg                             | 91.9                      | 81                              | 110 |
| EG005T: Nickel                                                | 7440-02-0  | 2   | mg/kg | <2                          | 55 mg/kg                              | 94.3                      | 80                              | 109 |
| EG005T: Selenium                                              | 7782-49-2  | 5   | mg/kg | <5                          | 5.37 mg/kg                            | 102                       | 92                              | 110 |
| EG005T: Vanadium                                              | 7440-62-2  | 5   | mg/kg | <5                          | 29.6 mg/kg                            | 93.0                      | 78                              | 106 |
| EG005T: Zinc                                                  | 7440-66-6  | 5   | mg/kg | <5                          | 60.8 mg/kg                            | 90.9                      | 79                              | 110 |
| EG005T: Total Metals by ICP-AES (QCLot: 1936395)              |            |     |       |                             |                                       |                           |                                 |     |
| EG005T: Arsenic                                               | 7440-38-2  | 5   | mg/kg | <5                          | 21.7 mg/kg                            | 89.2                      | 78                              | 107 |
| EG005T: Barium                                                | 7440-39-3  | 10  | mg/kg | <10                         | 143 mg/kg                             | 79.4                      | 76                              | 110 |
| EG005T: Beryllium                                             | 7440-41-7  | 1   | mg/kg | <1                          | 5.63 mg/kg                            | 93.1                      | 84                              | 113 |
| EG005T: Boron                                                 | 7440-42-8  | 50  | mg/kg | <50                         | 33.2 mg/kg                            | 101                       | 84                              | 126 |
| EG005T: Cadmium                                               | 7440-43-9  | 1   | mg/kg | <1                          | 4.64 mg/kg                            | 84.5                      | 76                              | 108 |
| EG005T: Chromium                                              | 7440-47-3  | 2   | mg/kg | <2                          | 43.9 mg/kg                            | 86.7                      | 78                              | 110 |
| EG005T: Cobalt                                                | 7440-48-4  | 2   | mg/kg | <2                          | 16 mg/kg                              | 87.1                      | 78                              | 112 |
| EG005T: Copper                                                | 7440-50-8  | 5   | mg/kg | <5                          | 32 mg/kg                              | 91.2                      | 78                              | 108 |
| EG005T: Lead                                                  | 7439-92-1  | 5   | mg/kg | <5                          | 40 mg/kg                              | 90.5                      | 78                              | 106 |
| EG005T: Manganese                                             | 7439-96-5  | 5   | mg/kg | <5                          | 130 mg/kg                             | 89.8                      | 81                              | 110 |
| EG005T: Nickel                                                | 7440-02-0  | 2   | mg/kg | <2                          | 55 mg/kg                              | 89.4                      | 80                              | 109 |
| EG005T: Selenium                                              | 7782-49-2  | 5   | mg/kg | <5                          | 5.37 mg/kg                            | 102                       | 92                              | 110 |
| EG005T: Vanadium                                              | 7440-62-2  | 5   | mg/kg | <5                          | 29.6 mg/kg                            | 88.9                      | 78                              | 106 |
| EG005T: Zinc                                                  | 7440-66-6  | 5   | mg/kg | <5                          | 60.8 mg/kg                            | 96.4                      | 79                              | 110 |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 1936394)    |            |     |       |                             |                                       |                           |                                 |     |
| EG035T: Mercury                                               | 7439-97-6  | 0.1 | mg/kg | <0.1                        | 2.57 mg/kg                            | 87.5                      | 77                              | 104 |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 1936396)    |            |     |       |                             |                                       |                           |                                 |     |
| EG035T: Mercury                                               | 7439-97-6  | 0.1 | mg/kg | <0.1                        | 2.57 mg/kg                            | 88.9                      | 77                              | 104 |
| EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 1935326) |            |     |       |                             |                                       |                           |                                 |     |



Sub-Matrix: **SOIL**

|                                                                                      |            |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |     |
|--------------------------------------------------------------------------------------|------------|------|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|-----|
|                                                                                      |            |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |     |
| Method: Compound                                                                     | CAS Number | LOR  | Unit  | Result                      |                                       |                           |                                 |     |
| <b>EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 1935326) - continued</b>     |            |      |       |                             |                                       |                           |                                 |     |
| EG048G: Hexavalent Chromium                                                          | 18540-29-9 | 0.5  | mg/kg | <0.5                        | 40 mg/kg                              | 92.3                      | 75                              | 112 |
| <b>EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QCLot: 1936660)</b> |            |      |       |                             |                                       |                           |                                 |     |
| EK028SF: Weak Acid Dissociable Cyanide                                               | ----       | 1    | mg/kg | <1                          | 20 mg/kg                              | 100                       | 83                              | 114 |
| <b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 1935212)</b>                       |            |      |       |                             |                                       |                           |                                 |     |
| EP066: Total Polychlorinated biphenyls                                               | ----       | 0.1  | mg/kg | <0.1                        | 1 mg/kg                               | 85.2                      | 63                              | 115 |
| <b>EP066: Polychlorinated Biphenyls (PCB) (QCLot: 1935374)</b>                       |            |      |       |                             |                                       |                           |                                 |     |
| EP066: Total Polychlorinated biphenyls                                               | ----       | 0.1  | mg/kg | <0.1                        | 1 mg/kg                               | 88.0                      | 63                              | 115 |
| <b>EP068A: Organochlorine Pesticides (OC) (QCLot: 1935211)</b>                       |            |      |       |                             |                                       |                           |                                 |     |
| EP068: alpha-BHC                                                                     | 319-84-6   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 94.9                      | 65                              | 120 |
| EP068: Hexachlorobenzene (HCB)                                                       | 118-74-1   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 92.0                      | 68                              | 121 |
| EP068: beta-BHC                                                                      | 319-85-7   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 95.8                      | 70                              | 121 |
| EP068: gamma-BHC                                                                     | 58-89-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 92.5                      | 64                              | 119 |
| EP068: delta-BHC                                                                     | 319-86-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 88.9                      | 56                              | 121 |
| EP068: Heptachlor                                                                    | 76-44-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 90.0                      | 63                              | 114 |
| EP068: Aldrin                                                                        | 309-00-2   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 97.4                      | 64                              | 121 |
| EP068: Heptachlor epoxide                                                            | 1024-57-3  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 93.7                      | 68                              | 120 |
| EP068: trans-Chlordane                                                               | 5103-74-2  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 96.7                      | 72                              | 124 |
| EP068: alpha-Endosulfan                                                              | 959-98-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 85.2                      | 69                              | 125 |
| EP068: cis-Chlordane                                                                 | 5103-71-9  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 99.2                      | 71                              | 123 |
| EP068: Dieldrin                                                                      | 60-57-1    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 96.6                      | 59                              | 123 |
| EP068: 4,4'-DDE                                                                      | 72-55-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 93.3                      | 70                              | 123 |
| EP068: Endrin                                                                        | 72-20-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 98.7                      | 64                              | 119 |
| EP068: beta-Endosulfan                                                               | 33213-65-9 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 87.1                      | 69                              | 124 |
| EP068: 4,4'-DDD                                                                      | 72-54-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 95.5                      | 66                              | 128 |
| EP068: Endrin aldehyde                                                               | 7421-93-4  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 96.9                      | 62                              | 121 |
| EP068: Endosulfan sulfate                                                            | 1031-07-8  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 76.7                      | 57                              | 124 |
| EP068: 4,4'-DDT                                                                      | 50-29-3    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 94.1                      | 60                              | 124 |
| EP068: Endrin ketone                                                                 | 53494-70-5 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 88.9                      | 73                              | 120 |
| EP068: Methoxychlor                                                                  | 72-43-5    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 91.6                      | 61                              | 121 |
| EP068: Mirex                                                                         | 2385-85-5  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 98.9                      | 69                              | 123 |
| <b>EP068A: Organochlorine Pesticides (OC) (QCLot: 1935377)</b>                       |            |      |       |                             |                                       |                           |                                 |     |
| EP068: alpha-BHC                                                                     | 319-84-6   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 94.8                      | 65                              | 120 |
| EP068: Hexachlorobenzene (HCB)                                                       | 118-74-1   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 97.2                      | 68                              | 121 |
| EP068: beta-BHC                                                                      | 319-85-7   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 94.8                      | 70                              | 121 |
| EP068: gamma-BHC                                                                     | 58-89-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 94.9                      | 64                              | 119 |
| EP068: delta-BHC                                                                     | 319-86-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 74.6                      | 56                              | 121 |
| EP068: Heptachlor                                                                    | 76-44-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 87.8                      | 63                              | 114 |
| EP068: Aldrin                                                                        | 309-00-2   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 93.7                      | 64                              | 121 |



Sub-Matrix: **SOIL**

| Sub-Matrix: SOIL                                                    |            |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |     |
|---------------------------------------------------------------------|------------|------|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|-----|
|                                                                     |            |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |     |
| Method: Compound                                                    | CAS Number | LOR  | Unit  | Result                      |                                       |                           |                                 |     |
| EP068A: Organochlorine Pesticides (OC) (QCLot: 1935377) - continued |            |      |       |                             |                                       |                           |                                 |     |
| EP068: Heptachlor epoxide                                           | 1024-57-3  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 92.0                      | 68                              | 120 |
| EP068: trans-Chlordane                                              | 5103-74-2  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 88.5                      | 72                              | 124 |
| EP068: alpha-Endosulfan                                             | 959-98-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 92.8                      | 69                              | 125 |
| EP068: cis-Chlordane                                                | 5103-71-9  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 93.0                      | 71                              | 123 |
| EP068: Dieldrin                                                     | 60-57-1    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 88.8                      | 59                              | 123 |
| EP068: 4,4'-DDE                                                     | 72-55-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 92.2                      | 70                              | 123 |
| EP068: Endrin                                                       | 72-20-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 118                       | 64                              | 119 |
| EP068: beta-Endosulfan                                              | 33213-65-9 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 94.1                      | 69                              | 124 |
| EP068: 4,4'-DDD                                                     | 72-54-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 92.7                      | 66                              | 128 |
| EP068: Endrin aldehyde                                              | 7421-93-4  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 93.5                      | 62                              | 121 |
| EP068: Endosulfan sulfate                                           | 1031-07-8  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 94.8                      | 57                              | 124 |
| EP068: 4,4'-DDT                                                     | 50-29-3    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 88.2                      | 60                              | 124 |
| EP068: Endrin ketone                                                | 53494-70-5 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 87.5                      | 73                              | 120 |
| EP068: Methoxychlor                                                 | 72-43-5    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 85.1                      | 61                              | 121 |
| EP068: Mirex                                                        | 2385-85-5  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 89.9                      | 69                              | 123 |
| EP068B: Organophosphorus Pesticides (OP) (QCLot: 1935211)           |            |      |       |                             |                                       |                           |                                 |     |
| EP068: Dichlorvos                                                   | 62-73-7    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 85.8                      | 63                              | 127 |
| EP068: Demeton-S-methyl                                             | 919-86-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 85.4                      | 53                              | 137 |
| EP068: Monocrotophos                                                | 6923-22-4  | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 64.7                      | 10                              | 136 |
| EP068: Dimethoate                                                   | 60-51-5    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 85.4                      | 56                              | 127 |
| EP068: Diazinon                                                     | 333-41-5   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 88.6                      | 70                              | 120 |
| EP068: Chlorpyrifos-methyl                                          | 5598-13-0  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 82.0                      | 70                              | 120 |
| EP068: Parathion-methyl                                             | 298-00-0   | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 88.6                      | 50                              | 132 |
| EP068: Malathion                                                    | 121-75-5   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 95.8                      | 63                              | 122 |
| EP068: Fenthion                                                     | 55-38-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 81.2                      | 70                              | 122 |
| EP068: Chlorpyrifos                                                 | 2921-88-2  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 78.1                      | 58                              | 123 |
| EP068: Parathion                                                    | 56-38-2    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 77.4                      | 56                              | 119 |
| EP068: Pirimphos-ethyl                                              | 23505-41-1 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 97.0                      | 68                              | 119 |
| EP068: Chlorfenvinphos                                              | 470-90-6   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 91.8                      | 45                              | 122 |
| EP068: Bromophos-ethyl                                              | 4824-78-6  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 97.9                      | 67                              | 116 |
| EP068: Fenamiphos                                                   | 22224-92-6 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 80.8                      | 50                              | 127 |
| EP068: Prothiofos                                                   | 34643-46-4 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 79.6                      | 68                              | 121 |
| EP068: Ethion                                                       | 563-12-2   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 97.9                      | 60                              | 123 |
| EP068: Carbophenothion                                              | 786-19-6   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 100                       | 68                              | 122 |
| EP068: Azinphos Methyl                                              | 86-50-0    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 79.5                      | 24                              | 113 |
| EP068B: Organophosphorus Pesticides (OP) (QCLot: 1935377)           |            |      |       |                             |                                       |                           |                                 |     |
| EP068: Dichlorvos                                                   | 62-73-7    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 95.8                      | 63                              | 127 |
| EP068: Demeton-S-methyl                                             | 919-86-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 95.2                      | 53                              | 137 |
| EP068: Monocrotophos                                                | 6923-22-4  | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 113                       | 10                              | 136 |

### Method Blank (MB) Report

| Spike<br>Concentration | Spike Recovery (%) | Recovery Limits (%) |      |
|------------------------|--------------------|---------------------|------|
|                        | LCS                | Low                 | High |

[illegible]





Sub-Matrix: **SOIL**

| Sub-Matrix: SOIL                                                |            |     |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                      |     |
|-----------------------------------------------------------------|------------|-----|-------|-----------------------------|---------------------------------------|---------------------------|--------------------------------------|-----|
|                                                                 |            |     |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low      High |     |
| Method: Compound                                                | CAS Number | LOR | Unit  | Result                      |                                       |                           |                                      |     |
| EP075(SIM)A: Phenolic Compounds (QCLot: 1935376) - continued    |            |     |       |                             |                                       |                           |                                      |     |
| EP075(SIM): Phenol                                              | 108-95-2   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 104                       | 70                                   | 125 |
| EP075(SIM): 2-Chlorophenol                                      | 95-57-8    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 91.8                      | 74                                   | 128 |
| EP075(SIM): 2-Methylphenol                                      | 95-48-7    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 93.4                      | 76                                   | 123 |
| EP075(SIM): 3- & 4-Methylphenol                                 | 1319-77-3  | 1   | mg/kg | <1                          | 6 mg/kg                               | 93.6                      | 70                                   | 128 |
| EP075(SIM): 2-Nitrophenol                                       | 88-75-5    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 70.8                      | 56                                   | 114 |
| EP075(SIM): 2,4-Dimethylphenol                                  | 105-67-9   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 98.4                      | 70                                   | 122 |
| EP075(SIM): 2,4-Dichlorophenol                                  | 120-83-2   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 97.8                      | 70                                   | 121 |
| EP075(SIM): 2,6-Dichlorophenol                                  | 87-65-0    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 94.3                      | 70                                   | 126 |
| EP075(SIM): 4-Chloro-3-methylphenol                             | 59-50-7    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 90.1                      | 67                                   | 120 |
| EP075(SIM): 2,4,6-Trichlorophenol                               | 88-06-2    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 89.9                      | 63                                   | 121 |
| EP075(SIM): 2,4,5-Trichlorophenol                               | 95-95-4    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 87.2                      | 71                                   | 133 |
| EP075(SIM): Pentachlorophenol                                   | 87-86-5    | 2   | mg/kg | <2                          | 6 mg/kg                               | 36.0                      | 20                                   | 110 |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1935213) |            |     |       |                             |                                       |                           |                                      |     |
| EP075(SIM): Naphthalene                                         | 91-20-3    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 99.5                      | 75                                   | 131 |
| EP075(SIM): Acenaphthylene                                      | 208-96-8   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 97.2                      | 70                                   | 132 |
| EP075(SIM): Acenaphthene                                        | 83-32-9    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 97.8                      | 80                                   | 128 |
| EP075(SIM): Fluorene                                            | 86-73-7    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 96.2                      | 70                                   | 128 |
| EP075(SIM): Phenanthrene                                        | 85-01-8    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 99.8                      | 80                                   | 128 |
| EP075(SIM): Anthracene                                          | 120-12-7   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 105                       | 72                                   | 126 |
| EP075(SIM): Fluoranthene                                        | 206-44-0   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 98.2                      | 70                                   | 128 |
| EP075(SIM): Pyrene                                              | 129-00-0   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 99.2                      | 80                                   | 125 |
| EP075(SIM): Benz(a)anthracene                                   | 56-55-3    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 91.6                      | 70                                   | 130 |
| EP075(SIM): Chrysene                                            | 218-01-9   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 96.9                      | 80                                   | 126 |
| EP075(SIM): Benzo(b+j)fluoranthene                              | 205-99-2   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 93.1                      | 71                                   | 124 |
|                                                                 | 205-82-3   |     |       |                             |                                       |                           |                                      |     |
| EP075(SIM): Benzo(k)fluoranthene                                | 207-08-9   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 99.5                      | 75                                   | 125 |
| EP075(SIM): Benzo(a)pyrene                                      | 50-32-8    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 93.2                      | 70                                   | 125 |
| EP075(SIM): Indeno(1,2,3.cd)pyrene                              | 193-39-5   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 100.0                     | 71                                   | 128 |
| EP075(SIM): Dibenz(a,h)anthracene                               | 53-70-3    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 99.4                      | 72                                   | 126 |
| EP075(SIM): Benzo(g,h,i)perylene                                | 191-24-2   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 103                       | 68                                   | 127 |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1935376) |            |     |       |                             |                                       |                           |                                      |     |
| EP075(SIM): Naphthalene                                         | 91-20-3    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 93.0                      | 75                                   | 131 |
| EP075(SIM): Acenaphthylene                                      | 208-96-8   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 91.2                      | 70                                   | 132 |
| EP075(SIM): Acenaphthene                                        | 83-32-9    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 91.2                      | 80                                   | 128 |
| EP075(SIM): Fluorene                                            | 86-73-7    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 89.2                      | 70                                   | 128 |
| EP075(SIM): Phenanthrene                                        | 85-01-8    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 93.1                      | 80                                   | 128 |
| EP075(SIM): Anthracene                                          | 120-12-7   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 97.8                      | 72                                   | 126 |
| EP075(SIM): Fluoranthene                                        | 206-44-0   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 93.1                      | 70                                   | 128 |
| EP075(SIM): Pyrene                                              | 129-00-0   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 94.8                      | 80                                   | 125 |



Sub-Matrix: **SOIL**

| Sub-Matrix: SOIL                                                                 |            |     |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |      |
|----------------------------------------------------------------------------------|------------|-----|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|------|
|                                                                                  |            |     |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |      |
| Method: Compound                                                                 | CAS Number | LOR | Unit  | Result                      |                                       |                           |                                 |      |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1935376) - continued      |            |     |       |                             |                                       |                           |                                 |      |
| EP075(SIM): Benz(a)anthracene                                                    | 56-55-3    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 90.1                      | 70                              | 130  |
| EP075(SIM): Chrysene                                                             | 218-01-9   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 93.2                      | 80                              | 126  |
| EP075(SIM): Benzo(b+j)fluoranthene                                               | 205-99-2   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 90.7                      | 71                              | 124  |
|                                                                                  | 205-82-3   |     |       |                             |                                       |                           |                                 |      |
| EP075(SIM): Benzo(k)fluoranthene                                                 | 207-08-9   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 88.9                      | 75                              | 125  |
| EP075(SIM): Benzo(a)pyrene                                                       | 50-32-8    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 86.1                      | 70                              | 125  |
| EP075(SIM): Indeno(1.2.3.cd)pyrene                                               | 193-39-5   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 86.7                      | 71                              | 128  |
| EP075(SIM): Dibenz(a,h)anthracene                                                | 53-70-3    | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 86.4                      | 72                              | 126  |
| EP075(SIM): Benzo(g,h,i)perylene                                                 | 191-24-2   | 0.5 | mg/kg | <0.5                        | 3 mg/kg                               | 86.7                      | 68                              | 127  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935129)                         |            |     |       |                             |                                       |                           |                                 |      |
| EP080: C6 - C9 Fraction                                                          | ----       | 10  | mg/kg | <10                         | 36 mg/kg                              | 81.9                      | 70                              | 127  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935132)                         |            |     |       |                             |                                       |                           |                                 |      |
| EP080: C6 - C9 Fraction                                                          | ----       | 10  | mg/kg | <10                         | 36 mg/kg                              | 110                       | 70                              | 127  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935210)                         |            |     |       |                             |                                       |                           |                                 |      |
| EP071: C10 - C14 Fraction                                                        | ----       | 50  | mg/kg | <50                         | 806 mg/kg                             | 98.9                      | 80                              | 120  |
| EP071: C15 - C28 Fraction                                                        | ----       | 100 | mg/kg | <100                        | 3006 mg/kg                            | 102                       | 84                              | 115  |
| EP071: C29 - C36 Fraction                                                        | ----       | 100 | mg/kg | <100                        | 1584 mg/kg                            | 96.9                      | 80                              | 112  |
| EP071: C10 - C36 Fraction (sum)                                                  | ----       | 50  | mg/kg | <50                         | ----                                  | ----                      | ----                            | ---- |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935375)                         |            |     |       |                             |                                       |                           |                                 |      |
| EP071: C10 - C14 Fraction                                                        | ----       | 50  | mg/kg | <50                         | 806 mg/kg                             | 102                       | 80                              | 120  |
| EP071: C15 - C28 Fraction                                                        | ----       | 100 | mg/kg | <100                        | 3006 mg/kg                            | 107                       | 84                              | 115  |
| EP071: C29 - C36 Fraction                                                        | ----       | 100 | mg/kg | <100                        | 1584 mg/kg                            | 101                       | 80                              | 112  |
| EP071: C10 - C36 Fraction (sum)                                                  | ----       | 50  | mg/kg | <50                         | ----                                  | ----                      | ----                            | ---- |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935129) |            |     |       |                             |                                       |                           |                                 |      |
| EP080: C6 - C10 Fraction                                                         | C6_C10     | 10  | mg/kg | <10                         | 45 mg/kg                              | 82.1                      | 68                              | 125  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935132) |            |     |       |                             |                                       |                           |                                 |      |
| EP080: C6 - C10 Fraction                                                         | C6_C10     | 10  | mg/kg | <10                         | 45 mg/kg                              | 104                       | 68                              | 125  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935210) |            |     |       |                             |                                       |                           |                                 |      |
| EP071: >C10 - C16 Fraction                                                       | ----       | 50  | mg/kg | <50                         | 1160 mg/kg                            | 99.8                      | 83                              | 117  |
| EP071: >C16 - C34 Fraction                                                       | ----       | 100 | mg/kg | <100                        | 3978 mg/kg                            | 102                       | 82                              | 114  |
| EP071: >C34 - C40 Fraction                                                       | ----       | 100 | mg/kg | <100                        | 313 mg/kg                             | 83.8                      | 73                              | 115  |
| EP071: >C10 - C40 Fraction (sum)                                                 | ----       | 50  | mg/kg | <50                         | ----                                  | ----                      | ----                            | ---- |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935375) |            |     |       |                             |                                       |                           |                                 |      |
| EP071: >C10 - C16 Fraction                                                       | ----       | 50  | mg/kg | <50                         | 1160 mg/kg                            | 104                       | 83                              | 117  |
| EP071: >C16 - C34 Fraction                                                       | ----       | 100 | mg/kg | <100                        | 3978 mg/kg                            | 105                       | 82                              | 114  |
| EP071: >C34 - C40 Fraction                                                       | ----       | 100 | mg/kg | <100                        | 313 mg/kg                             | 92.2                      | 73                              | 115  |
| EP071: >C10 - C40 Fraction (sum)                                                 | ----       | 50  | mg/kg | <50                         | ----                                  | ----                      | ----                            | ---- |



| Sub-Matrix: SOIL                                           |            |        |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |               |                    |                     |      |
|------------------------------------------------------------|------------|--------|-------|-----------------------------|---------------------------------------|---------------|--------------------|---------------------|------|
| Method: Compound                                           | CAS Number | LOR    | Unit  |                             | Result                                | Spike         | Spike Recovery (%) | Recovery Limits (%) |      |
|                                                            |            |        |       |                             |                                       | Concentration | LCS                | Low                 | High |
| EP080: BTEXN (QCLot: 1935129)                              |            |        |       |                             |                                       |               |                    |                     |      |
| EP080: Benzene                                             | 71-43-2    | 0.2    | mg/kg | <0.2                        | 2 mg/kg                               | 81.5          | 74                 | 124                 |      |
| EP080: Toluene                                             | 108-88-3   | 0.5    | mg/kg | <0.5                        | 2 mg/kg                               | 82.6          | 77                 | 125                 |      |
| EP080: Ethylbenzene                                        | 100-41-4   | 0.5    | mg/kg | <0.5                        | 2 mg/kg                               | 87.2          | 73                 | 125                 |      |
| EP080: meta- & para-Xylene                                 | 108-38-3   | 0.5    | mg/kg | <0.5                        | 4 mg/kg                               | 90.5          | 77                 | 128                 |      |
|                                                            | 106-42-3   |        |       |                             |                                       |               |                    |                     |      |
| EP080: ortho-Xylene                                        | 95-47-6    | 0.5    | mg/kg | <0.5                        | 2 mg/kg                               | 94.0          | 81                 | 128                 |      |
| EP080: Naphthalene                                         | 91-20-3    | 1      | mg/kg | <1                          | 0.5 mg/kg                             | 83.5          | 66                 | 130                 |      |
| EP080: BTEXN (QCLot: 1935132)                              |            |        |       |                             |                                       |               |                    |                     |      |
| EP080: Benzene                                             | 71-43-2    | 0.2    | mg/kg | <0.2                        | 2 mg/kg                               | 116           | 74                 | 124                 |      |
| EP080: Toluene                                             | 108-88-3   | 0.5    | mg/kg | <0.5                        | 2 mg/kg                               | 118           | 77                 | 125                 |      |
| EP080: Ethylbenzene                                        | 100-41-4   | 0.5    | mg/kg | <0.5                        | 2 mg/kg                               | 99.8          | 73                 | 125                 |      |
| EP080: meta- & para-Xylene                                 | 108-38-3   | 0.5    | mg/kg | <0.5                        | 4 mg/kg                               | 126           | 77                 | 128                 |      |
|                                                            | 106-42-3   |        |       |                             |                                       |               |                    |                     |      |
| EP080: ortho-Xylene                                        | 95-47-6    | 0.5    | mg/kg | <0.5                        | 2 mg/kg                               | 105           | 81                 | 128                 |      |
| EP080: Naphthalene                                         | 91-20-3    | 1      | mg/kg | <1                          | 0.5 mg/kg                             | 91.3          | 66                 | 130                 |      |
| Sub-Matrix: WATER                                          |            |        |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |               |                    |                     |      |
| Method: Compound                                           | CAS Number | LOR    | Unit  |                             | Result                                | Spike         | Spike Recovery (%) | Recovery Limits (%) |      |
|                                                            |            |        |       |                             |                                       | Concentration | LCS                | Low                 | High |
| EG020T: Total Metals by ICP-MS (QCLot: 1940781)            |            |        |       |                             |                                       |               |                    |                     |      |
| EG020A-T: Arsenic                                          | 7440-38-2  | 0.001  | mg/L  | <0.001                      | 0.1 mg/L                              | 96.0          | 90                 | 110                 |      |
| EG020A-T: Cadmium                                          | 7440-43-9  | 0.0001 | mg/L  | <0.0001                     | 0.1 mg/L                              | 98.2          | 86                 | 111                 |      |
| EG020A-T: Chromium                                         | 7440-47-3  | 0.001  | mg/L  | <0.001                      | 0.1 mg/L                              | 99.0          | 87                 | 109                 |      |
| EG020A-T: Copper                                           | 7440-50-8  | 0.001  | mg/L  | <0.001                      | 0.1 mg/L                              | 95.6          | 87                 | 108                 |      |
| EG020A-T: Lead                                             | 7439-92-1  | 0.001  | mg/L  | <0.001                      | 0.1 mg/L                              | 104           | 88                 | 109                 |      |
| EG020A-T: Nickel                                           | 7440-02-0  | 0.001  | mg/L  | <0.001                      | 0.1 mg/L                              | 97.5          | 87                 | 111                 |      |
| EG020A-T: Zinc                                             | 7440-66-6  | 0.005  | mg/L  | <0.005                      | 0.1 mg/L                              | 94.5          | 87                 | 113                 |      |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 1937453) |            |        |       |                             |                                       |               |                    |                     |      |
| EG035T: Mercury                                            | 7439-97-6  | 0.0001 | mg/L  | <0.0001                     | 0.01 mg/L                             | 91.1          | 81                 | 114                 |      |
| EP068A: Organochlorine Pesticides (OC) (QCLot: 1935115)    |            |        |       |                             |                                       |               |                    |                     |      |
| EP068: alpha-BHC                                           | 319-84-6   | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 68.7          | 51                 | 122                 |      |
| EP068: Hexachlorobenzene (HCB)                             | 118-74-1   | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 64.9          | 51                 | 118                 |      |
| EP068: beta-BHC                                            | 319-85-7   | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 70.2          | 57                 | 119                 |      |
| EP068: gamma-BHC                                           | 58-89-9    | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 86.6          | 51                 | 121                 |      |
| EP068: delta-BHC                                           | 319-86-8   | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 74.2          | 58                 | 114                 |      |
| EP068: Heptachlor                                          | 76-44-8    | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 70.2          | 47                 | 113                 |      |
| EP068: Aldrin                                              | 309-00-2   | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 69.7          | 53                 | 118                 |      |
| EP068: Heptachlor epoxide                                  | 1024-57-3  | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 71.9          | 53                 | 117                 |      |
| EP068: trans-Chlordane                                     | 5103-74-2  | 0.5    | µg/L  | <0.5                        | 2.5 µg/L                              | 69.6          | 50                 | 126                 |      |



Sub-Matrix: **WATER**

| Method: Compound                                                           |            |      |        | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                     |      |
|----------------------------------------------------------------------------|------------|------|--------|-----------------------------|---------------------------------------|---------------------------|---------------------|------|
|                                                                            |            |      |        |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%) |      |
|                                                                            |            |      |        |                             |                                       |                           | Low                 | High |
| CAS Number                                                                 | LOR        | Unit | Result |                             |                                       |                           |                     |      |
| <b>EP068A: Organochlorine Pesticides (OC) (QCLot: 1935115) - continued</b> |            |      |        |                             |                                       |                           |                     |      |
| EP068: alpha-Endosulfan                                                    | 959-98-8   | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 72.3                      | 55                  | 121  |
| EP068: cis-Chlordane                                                       | 5103-71-9  | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 69.8                      | 54                  | 120  |
| EP068: Dieldrin                                                            | 60-57-1    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 71.8                      | 50                  | 121  |
| EP068: 4,4'-DDE                                                            | 72-55-9    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 70.6                      | 54                  | 120  |
| EP068: Endrin                                                              | 72-20-8    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 77.5                      | 45                  | 122  |
| EP068: beta-Endosulfan                                                     | 33213-65-9 | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 72.0                      | 55                  | 120  |
| EP068: 4,4'-DDD                                                            | 72-54-8    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 71.5                      | 53                  | 126  |
| EP068: Endrin aldehyde                                                     | 7421-93-4  | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 85.1                      | 52                  | 123  |
| EP068: Endosulfan sulfate                                                  | 1031-07-8  | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 92.9                      | 48                  | 121  |
| EP068: 4,4'-DDT                                                            | 50-29-3    | 2    | µg/L   | <2.0                        | 2.5 µg/L                              | 92.1                      | 46                  | 120  |
| EP068: Endrin ketone                                                       | 53494-70-5 | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 89.3                      | 56                  | 118  |
| EP068: Methoxychlor                                                        | 72-43-5    | 2    | µg/L   | <2.0                        | 2.5 µg/L                              | 91.1                      | 42                  | 123  |
| <b>EP068B: Organophosphorus Pesticides (OP) (QCLot: 1935115)</b>           |            |      |        |                             |                                       |                           |                     |      |
| EP068: Dichlorvos                                                          | 62-73-7    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 85.5                      | 45                  | 123  |
| EP068: Demeton-S-methyl                                                    | 919-86-8   | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 103                       | 42                  | 129  |
| EP068: Monocrotophos                                                       | 6923-22-4  | 2    | µg/L   | <2.0                        | 2.5 µg/L                              | 14.6                      | 10                  | 43   |
| EP068: Dimethoate                                                          | 60-51-5    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 62.4                      | 38                  | 115  |
| EP068: Diazinon                                                            | 333-41-5   | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 72.4                      | 54                  | 121  |
| EP068: Chlorpyrifos-methyl                                                 | 5598-13-0  | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 72.4                      | 56                  | 118  |
| EP068: Parathion-methyl                                                    | 298-00-0   | 2    | µg/L   | <2.0                        | 2.5 µg/L                              | 77.3                      | 43                  | 115  |
| EP068: Malathion                                                           | 121-75-5   | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 79.9                      | 50                  | 120  |
| EP068: Fenthion                                                            | 55-38-9    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 70.8                      | 55                  | 119  |
| EP068: Chlorpyrifos                                                        | 2921-88-2  | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 71.4                      | 50                  | 122  |
| EP068: Parathion                                                           | 56-38-2    | 2    | µg/L   | <2.0                        | 2.5 µg/L                              | 73.3                      | 44                  | 114  |
| EP068: Pirimphos-ethyl                                                     | 23505-41-1 | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 72.0                      | 52                  | 117  |
| EP068: Chlorfenvinphos                                                     | 470-90-6   | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 75.9                      | 42                  | 126  |
| EP068: Bromophos-ethyl                                                     | 4824-78-6  | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 71.3                      | 50                  | 117  |
| EP068: Fenamiphos                                                          | 22224-92-6 | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 77.7                      | 45                  | 127  |
| EP068: Prothiofos                                                          | 34643-46-4 | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 75.0                      | 52                  | 120  |
| EP068: Ethion                                                              | 563-12-2   | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 74.5                      | 49                  | 118  |
| EP068: Carbophenothion                                                     | 786-19-6   | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 91.2                      | 52                  | 119  |
| EP068: Azinphos Methyl                                                     | 86-50-0    | 0.5  | µg/L   | <0.5                        | 2.5 µg/L                              | 102                       | 21                  | 120  |
| <b>EP075(SIM)A: Phenolic Compounds (QCLot: 1935114)</b>                    |            |      |        |                             |                                       |                           |                     |      |
| EP075(SIM): Phenol                                                         | 108-95-2   | 1    | µg/L   | <1.0                        | 5 µg/L                                | 32.7                      | 20                  | 49   |
| EP075(SIM): 2-Chlorophenol                                                 | 95-57-8    | 1    | µg/L   | <1.0                        | 5 µg/L                                | 79.5                      | 46                  | 103  |
| EP075(SIM): 2-Methylphenol                                                 | 95-48-7    | 1    | µg/L   | <1.0                        | 5 µg/L                                | 74.1                      | 43                  | 98   |
| EP075(SIM): 3- & 4-Methylphenol                                            | 1319-77-3  | 2    | µg/L   | <2.0                        | 10 µg/L                               | 67.0                      | 41                  | 92   |
| EP075(SIM): 2-Nitrophenol                                                  | 88-75-5    | 1    | µg/L   | <1.0                        | 5 µg/L                                | 86.4                      | 44                  | 114  |
| EP075(SIM): 2,4-Dimethylphenol                                             | 105-67-9   | 1    | µg/L   | <1.0                        | 5 µg/L                                | 87.3                      | 43                  | 115  |





Sub-Matrix: **WATER**

|                                                                                         |            |     |      | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |     |
|-----------------------------------------------------------------------------------------|------------|-----|------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|-----|
|                                                                                         |            |     |      |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |     |
| Method: Compound                                                                        | CAS Number | LOR | Unit | Result                      |                                       |                           |                                 |     |
| <b>EP075(SIM)A: Phenolic Compounds (QCLot: 1935114) - continued</b>                     |            |     |      |                             |                                       |                           |                                 |     |
| EP075(SIM): 2,4-Dichlorophenol                                                          | 120-83-2   | 1   | µg/L | <1.0                        | 5 µg/L                                | 84.6                      | 48                              | 111 |
| EP075(SIM): 2,6-Dichlorophenol                                                          | 87-65-0    | 1   | µg/L | <1.0                        | 5 µg/L                                | 85.6                      | 50                              | 116 |
| EP075(SIM): 4-Chloro-3-methylphenol                                                     | 59-50-7    | 1   | µg/L | <1.0                        | 5 µg/L                                | 85.6                      | 49                              | 110 |
| EP075(SIM): 2,4,6-Trichlorophenol                                                       | 88-06-2    | 1   | µg/L | <1.0                        | 5 µg/L                                | 87.1                      | 48                              | 113 |
| EP075(SIM): 2,4,5-Trichlorophenol                                                       | 95-95-4    | 1   | µg/L | <1.0                        | 5 µg/L                                | 90.5                      | 47                              | 115 |
| EP075(SIM): Pentachlorophenol                                                           | 87-86-5    | 2   | µg/L | <2.0                        | 10 µg/L                               | 88.4                      | 48                              | 130 |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1935114)</b>                  |            |     |      |                             |                                       |                           |                                 |     |
| EP075(SIM): Naphthalene                                                                 | 91-20-3    | 1   | µg/L | <1.0                        | 5 µg/L                                | 81.0                      | 48                              | 110 |
| EP075(SIM): Acenaphthylene                                                              | 208-96-8   | 1   | µg/L | <1.0                        | 5 µg/L                                | 90.0                      | 49                              | 124 |
| EP075(SIM): Acenaphthene                                                                | 83-32-9    | 1   | µg/L | <1.0                        | 5 µg/L                                | 88.6                      | 53                              | 117 |
| EP075(SIM): Fluorene                                                                    | 86-73-7    | 1   | µg/L | <1.0                        | 5 µg/L                                | 90.5                      | 54                              | 118 |
| EP075(SIM): Phenanthrene                                                                | 85-01-8    | 1   | µg/L | <1.0                        | 5 µg/L                                | 91.7                      | 57                              | 119 |
| EP075(SIM): Anthracene                                                                  | 120-12-7   | 1   | µg/L | <1.0                        | 5 µg/L                                | 92.6                      | 51                              | 113 |
| EP075(SIM): Fluoranthene                                                                | 206-44-0   | 1   | µg/L | <1.0                        | 5 µg/L                                | 93.2                      | 59                              | 123 |
| EP075(SIM): Pyrene                                                                      | 129-00-0   | 1   | µg/L | <1.0                        | 5 µg/L                                | 91.4                      | 58                              | 123 |
| EP075(SIM): Benz(a)anthracene                                                           | 56-55-3    | 1   | µg/L | <1.0                        | 5 µg/L                                | 93.1                      | 52                              | 126 |
| EP075(SIM): Chrysene                                                                    | 218-01-9   | 1   | µg/L | <1.0                        | 5 µg/L                                | 94.5                      | 55                              | 123 |
| EP075(SIM): Benzo(b+j)fluoranthene                                                      | 205-99-2   | 1   | µg/L | <1.0                        | 5 µg/L                                | 95.4                      | 52                              | 131 |
|                                                                                         | 205-82-3   |     |      |                             |                                       |                           |                                 |     |
| EP075(SIM): Benzo(k)fluoranthene                                                        | 207-08-9   | 1   | µg/L | <1.0                        | 5 µg/L                                | 93.0                      | 57                              | 126 |
| EP075(SIM): Benzo(a)pyrene                                                              | 50-32-8    | 0.5 | µg/L | <0.5                        | 5 µg/L                                | 94.4                      | 56                              | 126 |
| EP075(SIM): Indeno(1,2,3.cd)pyrene                                                      | 193-39-5   | 1   | µg/L | <1.0                        | 5 µg/L                                | 93.0                      | 53                              | 123 |
| EP075(SIM): Dibenz(a,h)anthracene                                                       | 53-70-3    | 1   | µg/L | <1.0                        | 5 µg/L                                | 93.6                      | 53                              | 125 |
| EP075(SIM): Benzo(g,h,i)perylene                                                        | 191-24-2   | 1   | µg/L | <1.0                        | 5 µg/L                                | 93.3                      | 53                              | 125 |
| <b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935113)</b>                         |            |     |      |                             |                                       |                           |                                 |     |
| EP071: C10 - C14 Fraction                                                               | ----       | 50  | µg/L | <50                         | 4331 µg/L                             | 84.7                      | 58                              | 134 |
| EP071: C15 - C28 Fraction                                                               | ----       | 100 | µg/L | <100                        | 16952 µg/L                            | 85.8                      | 60                              | 133 |
| EP071: C29 - C36 Fraction                                                               | ----       | 50  | µg/L | <50                         | 8695 µg/L                             | 88.6                      | 54                              | 137 |
| <b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935913)</b>                         |            |     |      |                             |                                       |                           |                                 |     |
| EP080: C6 - C9 Fraction                                                                 | ----       | 20  | µg/L | <20                         | 360 µg/L                              | 92.7                      | 68                              | 125 |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935113)</b> |            |     |      |                             |                                       |                           |                                 |     |
| EP071: >C10 - C16 Fraction                                                              | ----       | 100 | µg/L | <100                        | 6292 µg/L                             | 88.7                      | 58                              | 122 |
| EP071: >C16 - C34 Fraction                                                              | ----       | 100 | µg/L | <100                        | 22143 µg/L                            | 88.2                      | 56                              | 132 |
| EP071: >C34 - C40 Fraction                                                              | ----       | 100 | µg/L | <100                        | 1677 µg/L                             | 90.8                      | 58                              | 137 |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935913)</b> |            |     |      |                             |                                       |                           |                                 |     |
| EP080: C6 - C10 Fraction                                                                | C6_C10     | 20  | µg/L | <20                         | 450 µg/L                              | 90.7                      | 66                              | 123 |
| <b>EP080: BTEXN (QCLot: 1935913)</b>                                                    |            |     |      |                             |                                       |                           |                                 |     |
| EP080: Benzene                                                                          | 71-43-2    | 1   | µg/L | <1                          | 20 µg/L                               | 93.4                      | 74                              | 123 |



Sub-Matrix: **WATER**

| Sub-Matrix: WATER                         |            |     |      | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                    |                     |     |
|-------------------------------------------|------------|-----|------|-----------------------------|---------------------------------------|--------------------|---------------------|-----|
|                                           |            |     |      |                             | Spike<br>Concentration                | Spike Recovery (%) | Recovery Limits (%) |     |
| Method: Compound                          | CAS Number | LOR | Unit |                             |                                       | Result             | LCS                 | Low |
| EP080: BTEXN (QCLot: 1935913) - continued |            |     |      |                             |                                       |                    |                     |     |
| EP080: Toluene                            | 108-88-3   | 2   | µg/L | <2                          | 20 µg/L                               | 97.4               | 77                  | 128 |
| EP080: Ethylbenzene                       | 100-41-4   | 2   | µg/L | <2                          | 20 µg/L                               | 95.4               | 73                  | 126 |
| EP080: meta- & para-Xylene                | 108-38-3   | 2   | µg/L | <2                          | 40 µg/L                               | 97.4               | 72                  | 131 |
|                                           | 106-42-3   |     |      |                             |                                       |                    |                     |     |
| EP080: ortho-Xylene                       | 95-47-6    | 2   | µg/L | <2                          | 20 µg/L                               | 101                | 74                  | 131 |
| EP080: Naphthalene                        | 91-20-3    | 5   | µg/L | <5                          | 5 µg/L                                | 91.8               | 74                  | 124 |

### 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**

| 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 |
| EG005T: Total Metals by ICP-AES (QCLot: 1936393) |                  |                   |            |                          |                  |                     |      |
| EM1814720-006                                    | Anonymous        | EG005T: Arsenic   | 7440-38-2  | 50 mg/kg                 | 92.7             | 78                  | 124  |
|                                                  |                  | EG005T: Barium    | 7440-39-3  | 50 mg/kg                 | 74.8             | 71                  | 135  |
|                                                  |                  | EG005T: Beryllium | 7440-41-7  | 50 mg/kg                 | 93.2             | 85                  | 125  |
|                                                  |                  | EG005T: Cadmium   | 7440-43-9  | 50 mg/kg                 | 85.0             | 84                  | 116  |
|                                                  |                  | EG005T: Chromium  | 7440-47-3  | 50 mg/kg                 | 84.9             | 79                  | 121  |
|                                                  |                  | EG005T: Copper    | 7440-50-8  | 50 mg/kg                 | 91.8             | 82                  | 124  |
|                                                  |                  | EG005T: Lead      | 7439-92-1  | 50 mg/kg                 | 86.0             | 76                  | 124  |
|                                                  |                  | EG005T: Manganese | 7439-96-5  | 50 mg/kg                 | # Not Determined | 68                  | 136  |
|                                                  |                  | EG005T: Nickel    | 7440-02-0  | 50 mg/kg                 | 100              | 78                  | 120  |
|                                                  |                  | EG005T: Selenium  | 7782-49-2  | 50 mg/kg                 | 81.9             | 71                  | 125  |
|                                                  |                  | EG005T: Vanadium  | 7440-62-2  | 50 mg/kg                 | 85.4             | 76                  | 124  |
|                                                  |                  | EG005T: Zinc      | 7440-66-6  | 50 mg/kg                 | 79.2             | 74                  | 128  |
| EG005T: Total Metals by ICP-AES (QCLot: 1936395) |                  |                   |            |                          |                  |                     |      |
| EM1814874-011                                    | SS11-120918_040  | EG005T: Arsenic   | 7440-38-2  | 50 mg/kg                 | 94.6             | 78                  | 124  |
|                                                  |                  | EG005T: Barium    | 7440-39-3  | 50 mg/kg                 | 93.7             | 71                  | 135  |
|                                                  |                  | EG005T: Beryllium | 7440-41-7  | 50 mg/kg                 | 99.3             | 85                  | 125  |
|                                                  |                  | EG005T: Cadmium   | 7440-43-9  | 50 mg/kg                 | 91.1             | 84                  | 116  |
|                                                  |                  | EG005T: Chromium  | 7440-47-3  | 50 mg/kg                 | 94.6             | 79                  | 121  |
|                                                  |                  | EG005T: Copper    | 7440-50-8  | 50 mg/kg                 | 93.4             | 82                  | 124  |
|                                                  |                  | EG005T: Lead      | 7439-92-1  | 50 mg/kg                 | 91.5             | 76                  | 124  |
|                                                  |                  | EG005T: Manganese | 7439-96-5  | 50 mg/kg                 | 83.6             | 68                  | 136  |
|                                                  |                  | EG005T: Nickel    | 7440-02-0  | 50 mg/kg                 | 92.2             | 78                  | 120  |
|                                                  |                  | EG005T: Selenium  | 7782-49-2  | 50 mg/kg                 | 88.8             | 71                  | 125  |
|                                                  |                  |                   |            |                          |                  |                     |      |
|                                                  |                  |                   |            |                          |                  |                     |      |

Page : 27 of 30  
 Work Order : EM1814874  
 Client : GHD PTY LTD  
 Project : 3136558



| 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 |
| EG005T: Total Metals by ICP-AES (QCLot: 1936395) - continued                  |                  |                                        |            |                          |                  |                     |      |
| EM1814874-011                                                                 | SS11-120918_040  | EG005T: Vanadium                       | 7440-62-2  | 50 mg/kg                 | 99.1             | 76                  | 124  |
|                                                                               |                  | EG005T: Zinc                           | 7440-66-6  | 50 mg/kg                 | 92.6             | 74                  | 128  |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 1936394)                    |                  |                                        |            |                          |                  |                     |      |
| EM1814720-006                                                                 | Anonymous        | EG035T: Mercury                        | 7439-97-6  | 5 mg/kg                  | 94.2             | 76                  | 116  |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 1936396)                    |                  |                                        |            |                          |                  |                     |      |
| EM1814874-011                                                                 | SS11-120918_040  | EG035T: Mercury                        | 7439-97-6  | 5 mg/kg                  | 96.1             | 76                  | 116  |
| EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 1935326)                 |                  |                                        |            |                          |                  |                     |      |
| EM1814777-003                                                                 | Anonymous        | EG048G: Hexavalent Chromium            | 18540-29-9 | 40 mg/kg                 | 75.6             | 58                  | 114  |
| EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QCLot: 1936660) |                  |                                        |            |                          |                  |                     |      |
| EM1814871-002                                                                 | Anonymous        | EK028SF: Weak Acid Dissociable Cyanide | ----       | 20 mg/kg                 | 107              | 70                  | 130  |
| EP066: Polychlorinated Biphenyls (PCB) (QCLot: 1935212)                       |                  |                                        |            |                          |                  |                     |      |
| EM1814874-005                                                                 | SS05-120918_037  | EP066: Total Polychlorinated biphenyls | ----       | 1 mg/kg                  | 84.3             | 44                  | 144  |
| EP066: Polychlorinated Biphenyls (PCB) (QCLot: 1935374)                       |                  |                                        |            |                          |                  |                     |      |
| EM1814838-007                                                                 | Anonymous        | EP066: Total Polychlorinated biphenyls | ----       | 1 mg/kg                  | 90.6             | 44                  | 144  |
| EP068A: Organochlorine Pesticides (OC) (QCLot: 1935211)                       |                  |                                        |            |                          |                  |                     |      |
| EM1814874-002                                                                 | SS02-120918_034  | EP068: gamma-BHC                       | 58-89-9    | 0.5 mg/kg                | 79.9             | 22                  | 139  |
|                                                                               |                  | EP068: Heptachlor                      | 76-44-8    | 0.5 mg/kg                | 72.1             | 18                  | 130  |
|                                                                               |                  | EP068: Aldrin                          | 309-00-2   | 0.5 mg/kg                | 99.2             | 23                  | 136  |
|                                                                               |                  | EP068: Dieldrin                        | 60-57-1    | 0.5 mg/kg                | 91.8             | 42                  | 136  |
|                                                                               |                  | EP068: Endrin                          | 72-20-8    | 0.5 mg/kg                | 86.7             | 23                  | 146  |
|                                                                               |                  | EP068: 4,4'-DDT                        | 50-29-3    | 0.5 mg/kg                | 78.8             | 20                  | 133  |
| EP068A: Organochlorine Pesticides (OC) (QCLot: 1935377)                       |                  |                                        |            |                          |                  |                     |      |
| EM1814838-007                                                                 | Anonymous        | EP068: gamma-BHC                       | 58-89-9    | 0.5 mg/kg                | 97.9             | 22                  | 139  |
|                                                                               |                  | EP068: Heptachlor                      | 76-44-8    | 0.5 mg/kg                | 79.7             | 18                  | 130  |
|                                                                               |                  | EP068: Aldrin                          | 309-00-2   | 0.5 mg/kg                | 90.0             | 23                  | 136  |
|                                                                               |                  | EP068: Dieldrin                        | 60-57-1    | 0.5 mg/kg                | 93.7             | 42                  | 136  |
|                                                                               |                  | EP068: Endrin                          | 72-20-8    | 0.5 mg/kg                | 108              | 23                  | 146  |
|                                                                               |                  | EP068: 4,4'-DDT                        | 50-29-3    | 0.5 mg/kg                | 41.4             | 20                  | 133  |
| EP068B: Organophosphorus Pesticides (OP) (QCLot: 1935211)                     |                  |                                        |            |                          |                  |                     |      |
| EM1814874-002                                                                 | SS02-120918_034  | EP068: Diazinon                        | 333-41-5   | 0.5 mg/kg                | 83.9             | 49                  | 135  |
|                                                                               |                  | EP068: Chlorpyrifos-methyl             | 5598-13-0  | 0.5 mg/kg                | 60.8             | 41                  | 127  |
|                                                                               |                  | EP068: Pirimphos-ethyl                 | 23505-41-1 | 0.5 mg/kg                | 91.6             | 47                  | 133  |
|                                                                               |                  | EP068: Bromophos-ethyl                 | 4824-78-6  | 0.5 mg/kg                | 83.5             | 45                  | 133  |
|                                                                               |                  | EP068: Prothiofos                      | 34643-46-4 | 0.5 mg/kg                | 79.1             | 40                  | 128  |
| EP068B: Organophosphorus Pesticides (OP) (QCLot: 1935377)                     |                  |                                        |            |                          |                  |                     |      |
| EM1814838-007                                                                 | Anonymous        |                                        |            |                          |                  |                     |      |



| 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 |
| EP068B: Organophosphorus Pesticides (OP) (QCLot: 1935377) - continued            |                  |                                     |            |                          |                  |                     |      |
| EM1814838-007                                                                    | Anonymous        | EP068: Diazinon                     | 333-41-5   | 0.5 mg/kg                | 100.0            | 49                  | 135  |
|                                                                                  |                  | EP068: Chlorpyrifos-methyl          | 5598-13-0  | 0.5 mg/kg                | 79.0             | 41                  | 127  |
|                                                                                  |                  | EP068: Pirimphos-ethyl              | 23505-41-1 | 0.5 mg/kg                | 88.4             | 47                  | 133  |
|                                                                                  |                  | EP068: Bromophos-ethyl              | 4824-78-6  | 0.5 mg/kg                | 102              | 45                  | 133  |
|                                                                                  |                  | EP068: Prothiofos                   | 34643-46-4 | 0.5 mg/kg                | 76.0             | 40                  | 128  |
| EP075(SIM)A: Phenolic Compounds (QCLot: 1935213)                                 |                  |                                     |            |                          |                  |                     |      |
| EM1814874-004                                                                    | SS04-120918_037  | EP075(SIM): Phenol                  | 108-95-2   | 3 mg/kg                  | 110              | 63                  | 117  |
|                                                                                  |                  | EP075(SIM): 2-Chlorophenol          | 95-57-8    | 3 mg/kg                  | 94.0             | 65                  | 123  |
|                                                                                  |                  | EP075(SIM): 2-Nitrophenol           | 88-75-5    | 3 mg/kg                  | 117              | 40                  | 134  |
|                                                                                  |                  | EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7    | 3 mg/kg                  | 94.1             | 56                  | 122  |
|                                                                                  |                  | EP075(SIM): Pentachlorophenol       | 87-86-5    | 3 mg/kg                  | 93.2             | 15                  | 139  |
| EP075(SIM)A: Phenolic Compounds (QCLot: 1935376)                                 |                  |                                     |            |                          |                  |                     |      |
| EM1814838-002                                                                    | Anonymous        | EP075(SIM): Phenol                  | 108-95-2   | 3 mg/kg                  | 105              | 63                  | 117  |
|                                                                                  |                  | EP075(SIM): 2-Chlorophenol          | 95-57-8    | 3 mg/kg                  | 90.0             | 65                  | 123  |
|                                                                                  |                  | EP075(SIM): 2-Nitrophenol           | 88-75-5    | 3 mg/kg                  | 73.7             | 40                  | 134  |
|                                                                                  |                  | EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7    | 3 mg/kg                  | 90.0             | 56                  | 122  |
|                                                                                  |                  | EP075(SIM): Pentachlorophenol       | 87-86-5    | 3 mg/kg                  | 41.4             | 15                  | 139  |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1935213)                  |                  |                                     |            |                          |                  |                     |      |
| EM1814874-004                                                                    | SS04-120918_037  | EP075(SIM): Acenaphthene            | 83-32-9    | 3 mg/kg                  | 90.4             | 67                  | 117  |
|                                                                                  |                  | EP075(SIM): Pyrene                  | 129-00-0   | 3 mg/kg                  | 91.7             | 52                  | 148  |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1935376)                  |                  |                                     |            |                          |                  |                     |      |
| EM1814838-002                                                                    | Anonymous        | EP075(SIM): Acenaphthene            | 83-32-9    | 3 mg/kg                  | 90.8             | 67                  | 117  |
|                                                                                  |                  | EP075(SIM): Pyrene                  | 129-00-0   | 3 mg/kg                  | 75.5             | 52                  | 148  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935129)                         |                  |                                     |            |                          |                  |                     |      |
| EM1814874-002                                                                    | SS02-120918_034  | EP080: C6 - C9 Fraction             | ----       | 28 mg/kg                 | 68.9             | 42                  | 131  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935132)                         |                  |                                     |            |                          |                  |                     |      |
| EM1814874-022                                                                    | SS22-130918_038  | EP080: C6 - C9 Fraction             | ----       | 28 mg/kg                 | 75.4             | 42                  | 131  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935210)                         |                  |                                     |            |                          |                  |                     |      |
| EM1814874-002                                                                    | SS02-120918_034  | EP071: C10 - C14 Fraction           | ----       | 806 mg/kg                | 97.9             | 53                  | 123  |
|                                                                                  |                  | EP071: C15 - C28 Fraction           | ----       | 3006 mg/kg               | 102              | 70                  | 124  |
|                                                                                  |                  | EP071: C29 - C36 Fraction           | ----       | 1584 mg/kg               | 101              | 64                  | 118  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935375)                         |                  |                                     |            |                          |                  |                     |      |
| EM1814838-002                                                                    | Anonymous        | EP071: C10 - C14 Fraction           | ----       | 806 mg/kg                | 107              | 53                  | 123  |
|                                                                                  |                  | EP071: C15 - C28 Fraction           | ----       | 3006 mg/kg               | 111              | 70                  | 124  |
|                                                                                  |                  | EP071: C29 - C36 Fraction           | ----       | 1584 mg/kg               | 107              | 64                  | 118  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935129) |                  |                                     |            |                          |                  |                     |      |



Page : 29 of 30  
 Work Order : EM1814874  
 Client : GHD PTY LTD  
 Project : 3136558



| Sub-Matrix: SOIL                                                                             |                  |                            |            | Matrix Spike (MS) Report |                  |                     |      |
|----------------------------------------------------------------------------------------------|------------------|----------------------------|------------|--------------------------|------------------|---------------------|------|
|                                                                                              |                  |                            |            | Spike                    | SpikeRecovery(%) | Recovery Limits (%) |      |
| Laboratory sample ID                                                                         | Client sample ID | Method: Compound           | CAS Number | Concentration            | MS               | Low                 | High |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935129) - continued |                  |                            |            |                          |                  |                     |      |
| EM1814874-002                                                                                | SS02-120918_034  | EP080: C6 - C10 Fraction   | C6_C10     | 33 mg/kg                 | 64.7             | 39                  | 129  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935132)             |                  |                            |            |                          |                  |                     |      |
| EM1814874-022                                                                                | SS22-130918_038  | EP080: C6 - C10 Fraction   | C6_C10     | 33 mg/kg                 | 74.0             | 39                  | 129  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935210)             |                  |                            |            |                          |                  |                     |      |
| EM1814874-002                                                                                | SS02-120918_034  | EP071: >C10 - C16 Fraction | ----       | 1160 mg/kg               | 99.7             | 65                  | 123  |
|                                                                                              |                  | EP071: >C16 - C34 Fraction | ----       | 3978 mg/kg               | 102              | 67                  | 121  |
|                                                                                              |                  | EP071: >C34 - C40 Fraction | ----       | 313 mg/kg                | # Not Determined | 44                  | 126  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935375)             |                  |                            |            |                          |                  |                     |      |
| EM1814838-002                                                                                | Anonymous        | EP071: >C10 - C16 Fraction | ----       | 1160 mg/kg               | 110              | 65                  | 123  |
|                                                                                              |                  | EP071: >C16 - C34 Fraction | ----       | 3978 mg/kg               | 112              | 67                  | 121  |
|                                                                                              |                  | EP071: >C34 - C40 Fraction | ----       | 313 mg/kg                | 104              | 44                  | 126  |
| EP080: BTEXN (QCLot: 1935129)                                                                |                  |                            |            |                          |                  |                     |      |
| EM1814874-002                                                                                | SS02-120918_034  | EP080: Benzene             | 71-43-2    | 2 mg/kg                  | 81.1             | 50                  | 136  |
|                                                                                              |                  | EP080: Toluene             | 108-88-3   | 2 mg/kg                  | 83.0             | 56                  | 139  |
| EP080: BTEXN (QCLot: 1935132)                                                                |                  |                            |            |                          |                  |                     |      |
| EM1814874-022                                                                                | SS22-130918_038  | EP080: Benzene             | 71-43-2    | 2 mg/kg                  | 88.4             | 50                  | 136  |
|                                                                                              |                  | EP080: Toluene             | 108-88-3   | 2 mg/kg                  | 93.4             | 56                  | 139  |
| 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: 1940781)                                              |                  |                            |            |                          |                  |                     |      |
| EM1814833-002                                                                                | Anonymous        | EG020A-T: Arsenic          | 7440-38-2  | 1 mg/L                   | 94.9             | 82                  | 118  |
|                                                                                              |                  | EG020A-T: Cadmium          | 7440-43-9  | 0.25 mg/L                | 93.2             | 75                  | 129  |
|                                                                                              |                  | EG020A-T: Chromium         | 7440-47-3  | 1 mg/L                   | 92.4             | 80                  | 118  |
|                                                                                              |                  | EG020A-T: Copper           | 7440-50-8  | 1 mg/L                   | 86.6             | 81                  | 115  |
|                                                                                              |                  | EG020A-T: Lead             | 7439-92-1  | 1 mg/L                   | 95.2             | 83                  | 121  |
|                                                                                              |                  | EG020A-T: Nickel           | 7440-02-0  | 1 mg/L                   | 95.5             | 80                  | 118  |
|                                                                                              |                  | EG020A-T: Zinc             | 7440-66-6  | 1 mg/L                   | 97.0             | 74                  | 116  |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 1937453)                                   |                  |                            |            |                          |                  |                     |      |
| EM1814707-001                                                                                | Anonymous        | EG035T: Mercury            | 7439-97-6  | 0.01 mg/L                | # 53.7           | 70                  | 130  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 1935913)                                     |                  |                            |            |                          |                  |                     |      |
| EM1814889-002                                                                                | Anonymous        | EP080: C6 - C9 Fraction    | ----       | 280 µg/L                 | 71.2             | 43                  | 125  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 1935913)             |                  |                            |            |                          |                  |                     |      |
| EM1814889-002                                                                                | Anonymous        | EP080: C6 - C10 Fraction   | C6_C10     | 330 µg/L                 | 70.2             | 44                  | 122  |



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 |
| EP080: BTEXN (QCLot: 1935913) |                  |                  |            |                          |                  |                     |      |
| EM1814889-002                 | Anonymous        | EP080: Benzene   | 71-43-2    | 20 µg/L                  | 89.8             | 68                  | 130  |
|                               |                  | EP080: Toluene   | 108-88-3   | 20 µg/L                  | 93.4             | 72                  | 132  |

## QA/QC Compliance Assessment to assist with Quality Review

|              |                                                  |                         |                                    |
|--------------|--------------------------------------------------|-------------------------|------------------------------------|
| Work Order   | : EM1814874                                      | Page                    | : 1 of 15                          |
| Client       | : GHD PTY LTD                                    | Laboratory              | : Environmental Division Melbourne |
| Contact      | : KORY AUCH                                      | Telephone               | : +61-3-8549 9630                  |
| Project      | : 3136558                                        | Date Samples Received   | : 14-Sep-2018                      |
| Site         | : Wonthaggi PSP - Preliminary Site Investigation | Issue Date              | : 21-Sep-2018                      |
| Sampler      | : ISAAC, KORY AUCH                               | No. of samples received | : 28                               |
| Order number | :                                                | No. of samples analysed | : 28                               |

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

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



### 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                                                                               |
|----------------------------------------------------|----------------------|------------------|---------------------|------------|----------------|--------|---------------------------------------------------------------------------------------|
| <b>Matrix Spike (MS) Recoveries</b>                |                      |                  |                     |            |                |        |                                                                                       |
| EG005T: Total Metals by ICP-AES                    | EM1814720--006       | Anonymous        | Manganese           | 7439-96-5  | Not Determined | ----   | MS recovery not determined, background level greater than or equal to 4x spike level. |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2 | EM1814874--002       | SS02-120918_034  | >C34 - C40 Fraction | ----       | Not Determined | ----   | MS recovery not determined, background level greater than or equal to 4x spike level. |

Matrix: **WATER**

| Compound Group Name                       | Laboratory Sample ID | Client Sample ID | Analyte | CAS Number | Data   | Limits  | Comment                                         |
|-------------------------------------------|----------------------|------------------|---------|------------|--------|---------|-------------------------------------------------|
| <b>Matrix Spike (MS) Recoveries</b>       |                      |                  |         |            |        |         |                                                 |
| EG035T: Total Recoverable Mercury by FIMS | EM1814707--001       | Anonymous        | Mercury | 7439-97-6  | 53.7 % | 70-130% | Recovery less than lower data quality objective |

### Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

| Quality Control Sample Type        | Count |         | Rate (%) |          | Quality Control Specification  |
|------------------------------------|-------|---------|----------|----------|--------------------------------|
| Method                             | QC    | Regular | Actual   | Expected |                                |
| <b>Laboratory Duplicates (DUP)</b> |       |         |          |          |                                |
| TRH - Semivolatile Fraction        | 1     | 13      | 7.69     | 10.00    | NEPM 2013 B3 & ALS QC Standard |
| <b>Matrix Spikes (MS)</b>          |       |         |          |          |                                |
| PAH/Phenols (GC/MS - SIM)          | 0     | 1       | 0.00     | 5.00     | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                 | 0     | 1       | 0.00     | 5.00     | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction        | 0     | 13      | 0.00     | 5.00     | 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                          | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|---------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s) |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |





Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                      |                  | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|---------------------------------------------|------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)             |                  |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EA055: Moisture Content (Dried @ 105-110°C) |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EA055)        |                  | 12-Sep-2018 | ----                     | ----               | ----       | 17-Sep-2018   | 26-Sep-2018      | ✓          |
| SS01-120918_034,                            | SS02-120918_034, |             |                          |                    |            |               |                  |            |
| SS03-120918_034,                            | SS04-120918_037, |             |                          |                    |            |               |                  |            |
| SS05-120918_037,                            | SS06-120918_035, |             |                          |                    |            |               |                  |            |
| SS07-120918_035,                            | SS08-120918_039, |             |                          |                    |            |               |                  |            |
| SS09-120918_039,                            | SS10-120918_039, |             |                          |                    |            |               |                  |            |
| SS11-120918_040,                            | SS12-120918_040, |             |                          |                    |            |               |                  |            |
| SS13-120918_040,                            | SS14-120918_040, |             |                          |                    |            |               |                  |            |
| SS15-120918_040,                            | SS16-120918_040, |             |                          |                    |            |               |                  |            |
| SS17-120918_040,                            | SS18-120918_040  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EA055)        |                  | 13-Sep-2018 | ----                     | ----               | ----       | 17-Sep-2018   | 27-Sep-2018      | ✓          |
| SS19-130918_036,                            | SS20-130918_036, |             |                          |                    |            |               |                  |            |
| SS21-130918_036,                            | SS22-130918_038, |             |                          |                    |            |               |                  |            |
| SS23-130918_038,                            | SS24-130918_038, |             |                          |                    |            |               |                  |            |
| SS25-130918_038,                            | SS26-130918_038  |             |                          |                    |            |               |                  |            |
| EG005T: Total Metals by ICP-AES             |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG005T)       |                  | 12-Sep-2018 | 19-Sep-2018              | 11-Mar-2019        | ✓          | 19-Sep-2018   | 11-Mar-2019      | ✓          |
| SS01-120918_034,                            | SS02-120918_034, |             |                          |                    |            |               |                  |            |
| SS03-120918_034,                            | SS04-120918_037, |             |                          |                    |            |               |                  |            |
| SS05-120918_037,                            | SS06-120918_035, |             |                          |                    |            |               |                  |            |
| SS07-120918_035,                            | SS08-120918_039, |             |                          |                    |            |               |                  |            |
| SS09-120918_039,                            | SS10-120918_039, |             |                          |                    |            |               |                  |            |
| SS11-120918_040,                            | SS12-120918_040, |             |                          |                    |            |               |                  |            |
| SS13-120918_040,                            | SS14-120918_040, |             |                          |                    |            |               |                  |            |
| SS15-120918_040,                            | SS16-120918_040, |             |                          |                    |            |               |                  |            |
| SS17-120918_040,                            | SS18-120918_040  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG005T)       |                  | 13-Sep-2018 | 19-Sep-2018              | 12-Mar-2019        | ✓          | 19-Sep-2018   | 12-Mar-2019      | ✓          |
| SS19-130918_036,                            | SS20-130918_036, |             |                          |                    |            |               |                  |            |
| SS21-130918_036,                            | SS22-130918_038, |             |                          |                    |            |               |                  |            |
| SS23-130918_038,                            | SS24-130918_038, |             |                          |                    |            |               |                  |            |
| SS25-130918_038,                            | SS26-130918_038  |             |                          |                    |            |               |                  |            |



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                                                                                                                                                           |                                                                                                                                                                                 | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                                                                                                                  |                                                                                                                                                                                 |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EG035T: Total Recoverable Mercury by FIMS                                                                                                                                        |                                                                                                                                                                                 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG035T)                                                                                                                                            |                                                                                                                                                                                 | 12-Sep-2018 | 19-Sep-2018              | 10-Oct-2018        | ✓          | 19-Sep-2018   | 10-Oct-2018      | ✓          |
| SS01-120918_034,<br>SS03-120918_034,<br>SS05-120918_037,<br>SS07-120918_035,<br>SS09-120918_039,<br>SS11-120918_040,<br>SS13-120918_040,<br>SS15-120918_040,<br>SS17-120918_040, | SS02-120918_034,<br>SS04-120918_037,<br>SS06-120918_035,<br>SS08-120918_039,<br>SS10-120918_039,<br>SS12-120918_040,<br>SS14-120918_040,<br>SS16-120918_040,<br>SS18-120918_040 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG035T)                                                                                                                                            |                                                                                                                                                                                 | 13-Sep-2018 | 19-Sep-2018              | 11-Oct-2018        | ✓          | 19-Sep-2018   | 11-Oct-2018      | ✓          |
| SS19-130918_036,<br>SS21-130918_036,<br>SS23-130918_038,<br>SS25-130918_038,                                                                                                     | SS20-130918_036,<br>SS22-130918_038,<br>SS24-130918_038,<br>SS26-130918_038                                                                                                     |             |                          |                    |            |               |                  |            |
| EG048: Hexavalent Chromium (Alkaline Digest)                                                                                                                                     |                                                                                                                                                                                 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG048G)                                                                                                                                            |                                                                                                                                                                                 | 12-Sep-2018 | 18-Sep-2018              | 10-Oct-2018        | ✓          | 18-Sep-2018   | 25-Sep-2018      | ✓          |
| SS03-120918_034,<br>SS06-120918_035,<br>SS12-120918_040,                                                                                                                         | SS05-120918_037,<br>SS10-120918_039,<br>SS16-120918_040                                                                                                                         |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG048G)                                                                                                                                            |                                                                                                                                                                                 | 13-Sep-2018 | 18-Sep-2018              | 11-Oct-2018        | ✓          | 18-Sep-2018   | 25-Sep-2018      | ✓          |
| SS19-130918_036,                                                                                                                                                                 | SS23-130918_038                                                                                                                                                                 |             |                          |                    |            |               |                  |            |
| EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser                                                                                                                     |                                                                                                                                                                                 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EK028SF)                                                                                                                                           |                                                                                                                                                                                 | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✓          | 20-Sep-2018   | 03-Oct-2018      | ✓          |
| SS03-120918_034,<br>SS06-120918_035,<br>SS12-120918_040,                                                                                                                         | SS05-120918_037,<br>SS10-120918_039,<br>SS16-120918_040                                                                                                                         |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EK028SF)                                                                                                                                           |                                                                                                                                                                                 | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✓          | 20-Sep-2018   | 03-Oct-2018      | ✓          |
| SS19-130918_036,                                                                                                                                                                 | SS23-130918_038                                                                                                                                                                 |             |                          |                    |            |               |                  |            |
| EP066: Polychlorinated Biphenyls (PCB)                                                                                                                                           |                                                                                                                                                                                 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP066)                                                                                                                                             |                                                                                                                                                                                 | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS03-120918_034,<br>SS06-120918_035,<br>SS12-120918_040,                                                                                                                         | SS05-120918_037,<br>SS10-120918_039,<br>SS16-120918_040                                                                                                                         |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP066)                                                                                                                                             |                                                                                                                                                                                 | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS19-130918_036,                                                                                                                                                                 | SS23-130918_038                                                                                                                                                                 |             |                          |                    |            |               |                  |            |



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                                                                                                                                      |                                                                                                                                          | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                                                                                             |                                                                                                                                          |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP068A: Organochlorine Pesticides (OC)                                                                                                                      |                                                                                                                                          |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)                                                                                                                        |                                                                                                                                          | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS01-120918_034,<br>SS03-120918_034,<br>SS06-120918_035,<br>SS10-120918_039,<br>SS12-120918_040,<br>SS14-120918_040,<br>SS16-120918_040,<br>SS18-120918_040 | SS02-120918_034,<br>SS05-120918_037,<br>SS08-120918_039,<br>SS11-120918_040,<br>SS13-120918_040,<br>SS15-120918_040,<br>SS17-120918_040, |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)                                                                                                                        |                                                                                                                                          | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS19-130918_036,<br>SS21-130918_036,<br>SS23-130918_038,<br>SS25-130918_038,                                                                                | SS20-130918_036,<br>SS22-130918_038,<br>SS24-130918_038,<br>SS26-130918_038                                                              |             |                          |                    |            |               |                  |            |
| EP068B: Organophosphorus Pesticides (OP)                                                                                                                    |                                                                                                                                          |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)                                                                                                                        |                                                                                                                                          | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS01-120918_034,<br>SS03-120918_034,<br>SS06-120918_035,<br>SS10-120918_039,<br>SS12-120918_040,<br>SS14-120918_040,<br>SS16-120918_040,<br>SS18-120918_040 | SS02-120918_034,<br>SS05-120918_037,<br>SS08-120918_039,<br>SS11-120918_040,<br>SS13-120918_040,<br>SS15-120918_040,<br>SS17-120918_040, |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)                                                                                                                        |                                                                                                                                          | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS19-130918_036,<br>SS21-130918_036,<br>SS23-130918_038,<br>SS25-130918_038,                                                                                | SS20-130918_036,<br>SS22-130918_038,<br>SS24-130918_038,<br>SS26-130918_038                                                              |             |                          |                    |            |               |                  |            |
| EP068C: Triazines                                                                                                                                           |                                                                                                                                          |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)                                                                                                                        |                                                                                                                                          | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS03-120918_034,<br>SS06-120918_035,<br>SS12-120918_040,                                                                                                    | SS05-120918_037,<br>SS10-120918_039,<br>SS16-120918_040                                                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)                                                                                                                        |                                                                                                                                          | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS19-130918_036,                                                                                                                                            | SS23-130918_038                                                                                                                          |             |                          |                    |            |               |                  |            |



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                         |                  | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|------------------------------------------------|------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                |                  |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP068D: Pyrethroids                            |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)           |                  | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS03-120918_034,                               | SS05-120918_037, |             |                          |                    |            |               |                  |            |
| SS06-120918_035,                               | SS10-120918_039, |             |                          |                    |            |               |                  |            |
| SS12-120918_040,                               | SS16-120918_040  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)           |                  | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS19-130918_036,                               | SS23-130918_038  |             |                          |                    |            |               |                  |            |
| EP075(SIM)A: Phenolic Compounds                |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075(SIM))      |                  | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS03-120918_034,                               | SS04-120918_037, |             |                          |                    |            |               |                  |            |
| SS05-120918_037,                               | SS06-120918_035, |             |                          |                    |            |               |                  |            |
| SS07-120918_035,                               | SS10-120918_039, |             |                          |                    |            |               |                  |            |
| SS12-120918_040,                               | SS16-120918_040  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075(SIM))      |                  | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS19-130918_036,                               | SS23-130918_038  |             |                          |                    |            |               |                  |            |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075(SIM))      |                  | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS03-120918_034,                               | SS04-120918_037, |             |                          |                    |            |               |                  |            |
| SS05-120918_037,                               | SS06-120918_035, |             |                          |                    |            |               |                  |            |
| SS07-120918_035,                               | SS09-120918_039, |             |                          |                    |            |               |                  |            |
| SS10-120918_039,                               | SS12-120918_040, |             |                          |                    |            |               |                  |            |
| SS16-120918_040                                |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075(SIM))      |                  | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS19-130918_036,                               | SS23-130918_038  |             |                          |                    |            |               |                  |            |





Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                  |                  | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-----------------------------------------|------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)         |                  |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080/071: Total Petroleum Hydrocarbons |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)    |                  | 12-Sep-2018 | 17-Sep-2018              | 26-Sep-2018        | ✔          | 20-Sep-2018   | 26-Sep-2018      | ✔          |
| SS01-120918_034,                        | SS02-120918_034, |             |                          |                    |            |               |                  |            |
| SS03-120918_034,                        | SS04-120918_037, |             |                          |                    |            |               |                  |            |
| SS05-120918_037,                        | SS06-120918_035, |             |                          |                    |            |               |                  |            |
| SS07-120918_035,                        | SS08-120918_039, |             |                          |                    |            |               |                  |            |
| SS09-120918_039,                        | SS10-120918_039, |             |                          |                    |            |               |                  |            |
| SS11-120918_040,                        | SS12-120918_040, |             |                          |                    |            |               |                  |            |
| SS13-120918_040,                        | SS14-120918_040, |             |                          |                    |            |               |                  |            |
| SS15-120918_040,                        | SS16-120918_040, |             |                          |                    |            |               |                  |            |
| SS17-120918_040,                        | SS18-120918_040  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP071)    |                  | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS01-120918_034,                        | SS02-120918_034, |             |                          |                    |            |               |                  |            |
| SS03-120918_034,                        | SS04-120918_037, |             |                          |                    |            |               |                  |            |
| SS05-120918_037,                        | SS06-120918_035, |             |                          |                    |            |               |                  |            |
| SS07-120918_035,                        | SS08-120918_039, |             |                          |                    |            |               |                  |            |
| SS09-120918_039,                        | SS10-120918_039, |             |                          |                    |            |               |                  |            |
| SS11-120918_040,                        | SS12-120918_040, |             |                          |                    |            |               |                  |            |
| SS13-120918_040,                        | SS14-120918_040, |             |                          |                    |            |               |                  |            |
| SS15-120918_040,                        | SS16-120918_040, |             |                          |                    |            |               |                  |            |
| SS17-120918_040,                        | SS18-120918_040  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)    |                  | 13-Sep-2018 | 17-Sep-2018              | 27-Sep-2018        | ✔          | 20-Sep-2018   | 27-Sep-2018      | ✔          |
| SS19-130918_036,                        | SS20-130918_036, |             |                          |                    |            |               |                  |            |
| SS21-130918_036,                        | SS22-130918_038, |             |                          |                    |            |               |                  |            |
| SS23-130918_038,                        | SS24-130918_038, |             |                          |                    |            |               |                  |            |
| SS25-130918_038,                        | SS26-130918_038  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP071)    |                  | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✔          | 19-Sep-2018   | 29-Oct-2018      | ✔          |
| SS19-130918_036,                        | SS20-130918_036, |             |                          |                    |            |               |                  |            |
| SS21-130918_036,                        | SS22-130918_038, |             |                          |                    |            |               |                  |            |
| SS23-130918_038,                        | SS24-130918_038, |             |                          |                    |            |               |                  |            |
| SS25-130918_038,                        | SS26-130918_038  |             |                          |                    |            |               |                  |            |

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                                                                                                                                                           |                                                                                                                                                                                 | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                                                                                                                  |                                                                                                                                                                                 |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions                                                                                                                  |                                                                                                                                                                                 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)                                                                                                                                             |                                                                                                                                                                                 | 12-Sep-2018 | 17-Sep-2018              | 26-Sep-2018        | ✓          | 20-Sep-2018   | 26-Sep-2018      | ✓          |
| SS01-120918_034,<br>SS03-120918_034,<br>SS05-120918_037,<br>SS07-120918_035,<br>SS09-120918_039,<br>SS11-120918_040,<br>SS13-120918_040,<br>SS15-120918_040,<br>SS17-120918_040, | SS02-120918_034,<br>SS04-120918_037,<br>SS06-120918_035,<br>SS08-120918_039,<br>SS10-120918_039,<br>SS12-120918_040,<br>SS14-120918_040,<br>SS16-120918_040,<br>SS18-120918_040 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP071)                                                                                                                                             |                                                                                                                                                                                 | 12-Sep-2018 | 19-Sep-2018              | 26-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS01-120918_034,<br>SS03-120918_034,<br>SS05-120918_037,<br>SS07-120918_035,<br>SS09-120918_039,<br>SS11-120918_040,<br>SS13-120918_040,<br>SS15-120918_040,<br>SS17-120918_040, | SS02-120918_034,<br>SS04-120918_037,<br>SS06-120918_035,<br>SS08-120918_039,<br>SS10-120918_039,<br>SS12-120918_040,<br>SS14-120918_040,<br>SS16-120918_040,<br>SS18-120918_040 |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)                                                                                                                                             |                                                                                                                                                                                 | 13-Sep-2018 | 17-Sep-2018              | 27-Sep-2018        | ✓          | 20-Sep-2018   | 27-Sep-2018      | ✓          |
| SS19-130918_036,<br>SS21-130918_036,<br>SS23-130918_038,<br>SS25-130918_038,                                                                                                     | SS20-130918_036,<br>SS22-130918_038,<br>SS24-130918_038,<br>SS26-130918_038                                                                                                     |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP071)                                                                                                                                             |                                                                                                                                                                                 | 13-Sep-2018 | 19-Sep-2018              | 27-Sep-2018        | ✓          | 19-Sep-2018   | 29-Oct-2018      | ✓          |
| SS19-130918_036,<br>SS21-130918_036,<br>SS23-130918_038,<br>SS25-130918_038,                                                                                                     | SS20-130918_036,<br>SS22-130918_038,<br>SS24-130918_038,<br>SS26-130918_038                                                                                                     |             |                          |                    |            |               |                  |            |



Matrix: **SOIL**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

| Method                               |                  | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|--------------------------------------|------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)      |                  |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080: BTEXN                         |                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080) |                  | 12-Sep-2018 | 17-Sep-2018              | 26-Sep-2018        | ✓          | 20-Sep-2018   | 26-Sep-2018      | ✓          |
| SS01-120918_034,                     | SS02-120918_034, |             |                          |                    |            |               |                  |            |
| SS03-120918_034,                     | SS04-120918_037, |             |                          |                    |            |               |                  |            |
| SS05-120918_037,                     | SS06-120918_035, |             |                          |                    |            |               |                  |            |
| SS07-120918_035,                     | SS08-120918_039, |             |                          |                    |            |               |                  |            |
| SS09-120918_039,                     | SS10-120918_039, |             |                          |                    |            |               |                  |            |
| SS11-120918_040,                     | SS12-120918_040, |             |                          |                    |            |               |                  |            |
| SS13-120918_040,                     | SS14-120918_040, |             |                          |                    |            |               |                  |            |
| SS15-120918_040,                     | SS16-120918_040, |             |                          |                    |            |               |                  |            |
| SS17-120918_040,                     | SS18-120918_040  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080) |                  | 13-Sep-2018 | 17-Sep-2018              | 27-Sep-2018        | ✓          | 20-Sep-2018   | 27-Sep-2018      | ✓          |
| SS19-130918_036,                     | SS20-130918_036, |             |                          |                    |            |               |                  |            |
| SS21-130918_036,                     | SS22-130918_038, |             |                          |                    |            |               |                  |            |
| SS23-130918_038,                     | SS24-130918_038, |             |                          |                    |            |               |                  |            |
| SS25-130918_038,                     | SS26-130918_038  |             |                          |                    |            |               |                  |            |

Matrix: **WATER**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

| Method                                                             | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|--------------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                    |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EG020T: Total Metals by ICP-MS                                     |             |                          |                    |            |               |                  |            |
| Clear Plastic Bottle - Nitric Acid; Unspecified (EG020A-T)<br>RB01 | 13-Sep-2018 | 20-Sep-2018              | 12-Mar-2019        | ✓          | 20-Sep-2018   | 12-Mar-2019      | ✓          |
| EG035T: Total Recoverable Mercury by FIMS                          |             |                          |                    |            |               |                  |            |
| Clear Plastic Bottle - Nitric Acid; Unspecified (EG035T)<br>RB01   | 13-Sep-2018 | ----                     | ----               | ----       | 19-Sep-2018   | 11-Oct-2018      | ✓          |
| EP068A: Organochlorine Pesticides (OC)                             |             |                          |                    |            |               |                  |            |
| Amber Glass Bottle - Unpreserved (EP068)<br>RB01                   | 13-Sep-2018 | 17-Sep-2018              | 20-Sep-2018        | ✓          | 19-Sep-2018   | 27-Oct-2018      | ✓          |
| EP068B: Organophosphorus Pesticides (OP)                           |             |                          |                    |            |               |                  |            |
| Amber Glass Bottle - Unpreserved (EP068)<br>RB01                   | 13-Sep-2018 | 17-Sep-2018              | 20-Sep-2018        | ✓          | 19-Sep-2018   | 27-Oct-2018      | ✓          |
| EP075(SIM)A: Phenolic Compounds                                    |             |                          |                    |            |               |                  |            |
| Amber Glass Bottle - Unpreserved (EP075(SIM))<br>RB01              | 13-Sep-2018 | 17-Sep-2018              | 20-Sep-2018        | ✓          | 19-Sep-2018   | 27-Oct-2018      | ✓          |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons                     |             |                          |                    |            |               |                  |            |
| Amber Glass Bottle - Unpreserved (EP075(SIM))<br>RB01              | 13-Sep-2018 | 17-Sep-2018              | 20-Sep-2018        | ✓          | 19-Sep-2018   | 27-Oct-2018      | ✓          |
| EP080/071: Total Petroleum Hydrocarbons                            |             |                          |                    |            |               |                  |            |
| Amber Glass Bottle - Unpreserved (EP071)<br>RB01                   | 13-Sep-2018 | 17-Sep-2018              | 20-Sep-2018        | ✓          | 19-Sep-2018   | 27-Oct-2018      | ✓          |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>RB01, TB01               | 13-Sep-2018 | 18-Sep-2018              | 27-Sep-2018        | ✓          | 18-Sep-2018   | 27-Sep-2018      | ✓          |

Page : 10 of 15  
 Work Order : EM1814874  
 Client : GHD PTY LTD  
 Project : 3136558



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                                          | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-----------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                 |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions |             |                          |                    |            |               |                  |            |
| Amber Glass Bottle - Unpreserved (EP071)<br>RB01                | 13-Sep-2018 | 17-Sep-2018              | 20-Sep-2018        | ✓          | 19-Sep-2018   | 27-Oct-2018      | ✓          |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>RB01, TB01            | 13-Sep-2018 | 18-Sep-2018              | 27-Sep-2018        | ✓          | 18-Sep-2018   | 27-Sep-2018      | ✓          |
| EP080: BTEXN                                                    |             |                          |                    |            |               |                  |            |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>RB01, TB01            | 13-Sep-2018 | 18-Sep-2018              | 27-Sep-2018        | ✓          | 18-Sep-2018   | 27-Sep-2018      | ✓          |





## 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)                             |            |       |         |          |          |                               |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 2     | 20      | 10.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Moisture Content                                        | EA055      | 4     | 32      | 12.50    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 3     | 23      | 13.04    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 4     | 31      | 12.90    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 2     | 16      | 12.50    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 4     | 40      | 10.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES                                 | EG005T     | 5     | 40      | 12.50    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071      | 4     | 38      | 10.53    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                      | EP080      | 4     | 40      | 10.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| WAD Cyanide by Segmented Flow Analyser                  | EK028SF    | 2     | 10      | 20.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Laboratory Control Samples (LCS)                        |            |       |         |          |          |                               |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 2     | 20      | 10.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 2     | 23      | 8.70     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 2     | 31      | 6.45     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 2     | 16      | 12.50    | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES                                 | EG005T     | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071      | 2     | 38      | 5.26     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                      | EP080      | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| WAD Cyanide by Segmented Flow Analyser                  | EK028SF    | 1     | 10      | 10.00    | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Method Blanks (MB)                                      |            |       |         |          |          |                               |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 1     | 20      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 2     | 23      | 8.70     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 2     | 31      | 6.45     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 2     | 16      | 12.50    | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES                                 | EG005T     | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071      | 2     | 38      | 5.26     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                      | EP080      | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| WAD Cyanide by Segmented Flow Analyser                  | EK028SF    | 1     | 10      | 10.00    | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Matrix Spikes (MS)                                      |            |       |         |          |          |                               |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 1     | 20      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 2     | 23      | 8.70     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 2     | 31      | 6.45     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 2     | 16      | 12.50    | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |



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 |                                |
| Matrix Spikes (MS) - Continued         |         |       |         |          |          |            |                                |
| Total Metals by ICP-AES                | EG005T  | 2     | 40      | 5.00     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction            | EP071   | 2     | 38      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                     | EP080   | 2     | 40      | 5.00     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| WAD Cyanide by Segmented Flow Analyser | EK028SF | 1     | 10      | 10.00    | 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)      |            |       |         |          |          |            |                                |
| PAH/Phenols (GC/MS - SIM)        | EP075(SIM) | 1     | 1       | 100.00   | 10.00    | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS               | EP068      | 1     | 1       | 100.00   | 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-MS - Suite A | EG020A-T   | 2     | 15      | 13.33    | 10.00    | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction      | EP071      | 1     | 13      | 7.69     | 10.00    | ✖          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX               | EP080      | 2     | 19      | 10.53    | 10.00    | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Laboratory Control Samples (LCS) |            |       |         |          |          |            |                                |
| PAH/Phenols (GC/MS - SIM)        | EP075(SIM) | 1     | 1       | 100.00   | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS               | EP068      | 1     | 1       | 100.00   | 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-MS - Suite A | EG020A-T   | 1     | 15      | 6.67     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction      | EP071      | 1     | 13      | 7.69     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX               | EP080      | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Method Blanks (MB)               |            |       |         |          |          |            |                                |
| PAH/Phenols (GC/MS - SIM)        | EP075(SIM) | 1     | 1       | 100.00   | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS               | EP068      | 1     | 1       | 100.00   | 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-MS - Suite A | EG020A-T   | 1     | 15      | 6.67     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction      | EP071      | 1     | 13      | 7.69     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX               | EP080      | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Matrix Spikes (MS)               |            |       |         |          |          |            |                                |
| PAH/Phenols (GC/MS - SIM)        | EP075(SIM) | 0     | 1       | 0.00     | 5.00     | ✖          | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS               | EP068      | 0     | 1       | 0.00     | 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-MS - Suite A | EG020A-T   | 1     | 15      | 6.67     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction      | EP071      | 0     | 13      | 0.00     | 5.00     | ✖          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX               | EP080      | 1     | 19      | 5.26     | 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 7.1 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 (SnCl <sub>2</sub> ) (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 SnCl <sub>2</sub> 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)                                                                                                                                                                                                                                                                                                                                   |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | SOIL   | In house: Referenced to USEPA SW846, Method 3060A. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| WAD Cyanide by Segmented Flow Analyser                  | EK028SF    | SOIL   | In house: Referenced to APHA 4500-CN-O. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Hydrogen cyanide is liberated from a slightly acidified (pH 4.5) and is dialysed. Tight cyanide complexes that would not be amenable to oxidation by chlorine are not converted. Iron cyanide complexes are precipitated with zinc acetate.<br>Liberated HCN diffuses through a membrane into a stream of sodium hydroxide where it is carried as CN-<br>The cyanide in caustic solution is buffered to pH 5.2 and further converted to cyanogen chloride by reaction with chloramine-T. Cyanogen chloride subsequently reacts with 4-pyridine carboxylic and 1,3 - dimethylbarbituric acids to give a red colour complex. This colour is measured at 600 nm.<br>This method is compliant with NEPM (2013) Schedule B(3) |
| Polychlorinated Biphenyls (PCB)                         | EP066      | SOIL   | In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Pesticides by GCMS                                      | EP068      | SOIL   | In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| TRH - Semivolatile Fraction                             | EP071      | SOIL   | In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



| Analytical Methods               | Method     | Matrix | Method Descriptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------|------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TRH Volatiles/BTEX               | EP080      | SOIL   | In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.                                                                                                                                                                                                                                                                                                                              |
| 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 (SnCl <sub>2</sub> )(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 SnCl <sub>2</sub> 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) |
| Pesticides by GCMS               | EP068      | WATER  | In house: Referenced to USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)                                                                                                                                                                                                                                                                                                               |
| TRH - Semivolatile Fraction      | EP071      | WATER  | In house: Referenced to USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)                                                                                                                                                                                                                                                               |
| PAH/Phenols (GC/MS - SIM)        | EP075(SIM) | WATER  | In house: Referenced to USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)                                                                                                                                                                                                                                                                                                   |
| TRH Volatiles/BTEX               | EP080      | WATER  | In house: Referenced to USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)                                                                                                                                         |

| Preparation Methods                                        | Method  | Matrix | Method Descriptions                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|---------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NaOH leach for CN in Soils                                 | CN-PR   | SOIL   | In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.                                                                                                                                                                                                                                                                                                                                       |
| Alkaline digestion for Hexavalent Chromium                 | EG048PR | SOIL   | In house: Referenced to USEPA SW846, Method 3060A.                                                                                                                                                                                                                                                                                                                                                                      |
| 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) |
| Methanolic Extraction of Soils for Purge and Trap          | ORG16   | SOIL   | In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.                                                                                                                                                                                                                                                                       |
| Tumbler Extraction of Solids                               | ORG17   | SOIL   | In house: Mechanical agitation (tumbler). 10g of sample, Na <sub>2</sub> SO <sub>4</sub> 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)                                                                                                                                                                       |



Page : 15 of 15  
Work Order : EM1814874  
Client : GHD PTY LTD  
Project : 3136558



| Preparation Methods                     | Method  | Matrix | Method Descriptions                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------|---------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Separatory Funnel Extraction of Liquids | ORG14   | WATER  | In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3) . ALS default excludes sediment which may be resident in the container. |
| Volatiles Water Preparation             | ORG16-W | WATER  | A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.                                                                                                                                                                                                                                                                                                        |

## CERTIFICATE OF ANALYSIS

**Work Order** : **EM1900929**  
**Client** : **GHD PTY LTD**  
**Contact** : **KORY AUCH**  
**Address** : **LEVEL 8, 180 LONSDALE ST**  
**MELBOURNE VIC, AUSTRALIA 3001**  
**Telephone** : **----**  
**Project** : **3136558**  
**Order number** : **----**  
**C-O-C number** : **----**  
**Sampler** : **KA**  
**Site** : **Wonthaggi PSP - Targeted Intrusive Investigation**  
**Quote number** : **EN/005/18**  
**No. of samples received** : **41**  
**No. of samples analysed** : **23**

**Page** : 1 of 46  
**Laboratory** : Environmental Division Melbourne  
**Contact** : Shirley LeCornu  
**Address** : 4 Westall Rd Springvale VIC Australia 3171  
**Telephone** : +6138549 9630  
**Date Samples Received** : 23-Jan-2019 12:50  
**Date Analysis Commenced** : 24-Jan-2019  
**Issue Date** : 01-Feb-2019 12:16



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

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

This Certificate of Analysis contains the following information:

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

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

### Signatories

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

| <i>Signatories</i>  | <i>Position</i>                     | <i>Accreditation Category</i>         |
|---------------------|-------------------------------------|---------------------------------------|
| Arenie Vijayaratnam | Non-metals prep supervisor          | Melbourne Inorganics, Springvale, VIC |
| Dilani Fernando     | Senior Inorganic Chemist            | Melbourne Inorganics, Springvale, VIC |
| Nikki Stepniewski   | Senior Inorganic Instrument Chemist | Melbourne Inorganics, Springvale, VIC |
| Vanessa Phung       | Approved Asbestos Identifier        | Melbourne Asbestos, Springvale, VIC   |
| Xing Lin            | Senior Organic Chemist              | Melbourne Organics, Springvale, VIC   |



## 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.

- pH analysis is done under non-stirring condition.
- EG048G: EM1900929 #21 Poor matrix spike recovery for hexavalent chromium due to sample matrix. Confirmed by re-extraction and re-analysis.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Negative results for vinyl tiles should be confirmed by an independent analytical technique.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) 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), Dibenzo(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.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No\*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                        |            |            |      | Client sample ID  |  | TP01_0.5          | TP02_0.1 | TP02_0.5          | TP03_0.1 | TP04_0.2          |  |                   |  |
|-----------------------------------------------------------|------------|------------|------|-------------------|--|-------------------|----------|-------------------|----------|-------------------|--|-------------------|--|
| Client sampling date / time                               |            |            |      | 22-Jan-2019 07:30 |  | 22-Jan-2019 09:00 |          | 22-Jan-2019 09:10 |          | 22-Jan-2019 09:40 |  | 22-Jan-2019 13:00 |  |
| Compound                                                  | CAS Number | LOR        | Unit | EM1900929-001     |  | EM1900929-003     |          | EM1900929-004     |          | EM1900929-006     |  | EM1900929-009     |  |
|                                                           |            |            |      | Result            |  | Result            |          | Result            |          | Result            |  | Result            |  |
| EA001: pH in soil using 0.01M CaCl extract                |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| pH (CaCl2)                                                |            | ----       | 0.1  | pH Unit           |  | ----              | ----     | ----              | ----     | 6.5               |  |                   |  |
| EA055: Moisture Content (Dried @ 105-110°C)               |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Moisture Content                                          |            | ----       | 1.0  | %                 |  | 13.1              | 15.1     | 17.5              | 15.9     | 13.0              |  |                   |  |
| EA200: AS 4964 - 2004 Identification of Asbestos in Soils |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Asbestos Detected                                         |            | 1332-21-4  | 0.1  | g/kg              |  | ----              | No       | ----              | No       | No                |  |                   |  |
| Asbestos (Trace)                                          |            | 1332-21-4  | 5    | Fibres            |  | ----              | No       | ----              | No       | No                |  |                   |  |
| Asbestos Type                                             |            | 1332-21-4  | -    | --                |  | ----              | -        | ----              | -        | -                 |  |                   |  |
| Sample weight (dry)                                       |            | ----       | 0.01 | g                 |  | ----              | 24.7     | ----              | 4.90     | 21.0              |  |                   |  |
| APPROVED IDENTIFIER:                                      |            | ----       | -    | --                |  | ----              | V.PHUNG  | ----              | V.PHUNG  | V.PHUNG           |  |                   |  |
| Synthetic Mineral Fibre                                   |            | ----       | 0.1  | g/kg              |  | ----              | No       | ----              | No       | No                |  |                   |  |
| Organic Fibre                                             |            | ----       | 0.1  | g/kg              |  | ----              | No       | ----              | Yes      | Yes               |  |                   |  |
| EG005T: Total Metals by ICP-AES                           |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Arsenic                                                   |            | 7440-38-2  | 5    | mg/kg             |  | ----              | ----     | ----              | ----     | <5                |  |                   |  |
| Cadmium                                                   |            | 7440-43-9  | 1    | mg/kg             |  | ----              | ----     | ----              | ----     | <1                |  |                   |  |
| Copper                                                    |            | 7440-50-8  | 5    | mg/kg             |  | ----              | ----     | ----              | ----     | 20                |  |                   |  |
| Lead                                                      |            | 7439-92-1  | 5    | mg/kg             |  | ----              | ----     | ----              | ----     | 24                |  |                   |  |
| Molybdenum                                                |            | 7439-98-7  | 2    | mg/kg             |  | ----              | ----     | ----              | ----     | <2                |  |                   |  |
| Nickel                                                    |            | 7440-02-0  | 2    | mg/kg             |  | ----              | ----     | ----              | ----     | 29                |  |                   |  |
| Selenium                                                  |            | 7782-49-2  | 5    | mg/kg             |  | ----              | ----     | ----              | ----     | <5                |  |                   |  |
| Silver                                                    |            | 7440-22-4  | 2    | mg/kg             |  | ----              | ----     | ----              | ----     | <2                |  |                   |  |
| Tin                                                       |            | 7440-31-5  | 5    | mg/kg             |  | ----              | ----     | ----              | ----     | <5                |  |                   |  |
| Zinc                                                      |            | 7440-66-6  | 5    | mg/kg             |  | ----              | ----     | ----              | ----     | 69                |  |                   |  |
| EG035T: Total Recoverable Mercury by FIMS                 |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Mercury                                                   |            | 7439-97-6  | 0.1  | mg/kg             |  | ----              | ----     | ----              | ----     | <0.1              |  |                   |  |
| EG048: Hexavalent Chromium (Alkaline Digest)              |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Hexavalent Chromium                                       |            | 18540-29-9 | 0.5  | mg/kg             |  | ----              | ----     | ----              | ----     | <0.5              |  |                   |  |
| EK026SF: Total CN by Segmented Flow Analyser              |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Total Cyanide                                             |            | 57-12-5    | 1    | mg/kg             |  | ----              | ----     | ----              | ----     | 1                 |  |                   |  |
| EK040T: Fluoride Total                                    |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Fluoride                                                  |            | 16984-48-8 | 40   | mg/kg             |  | ----              | ----     | ----              | ----     | 180               |  |                   |  |
| EP066: Polychlorinated Biphenyls (PCB)                    |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |
| Total Polychlorinated biphenyls                           |            | ----       | 0.1  | mg/kg             |  | ----              | ----     | ----              | ----     | <0.1              |  |                   |  |
| Total Polychlorinated biphenyls                           |            | ----       | 0.1  | mg/kg             |  | <0.1              | <0.1     | <0.1              | <0.1     | ----              |  |                   |  |
| EP068A: Organochlorine Pesticides (OC)                    |            |            |      |                   |  |                   |          |                   |          |                   |  |                   |  |





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                           |                      |      |       | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2          |
|-----------------------------------------------------------|----------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |                      |      |       | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |
| Compound                                                  | CAS Number           | LOR  | Unit  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |
|                                                           |                      |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP068A: Organochlorine Pesticides (OC) - Continued</b> |                      |      |       |                   |                   |                   |                   |                   |
| alpha-BHC                                                 | 319-84-6             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Hexachlorobenzene (HCB)                                   | 118-74-1             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| beta-BHC                                                  | 319-85-7             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| gamma-BHC                                                 | 58-89-9              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| delta-BHC                                                 | 319-86-8             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Heptachlor                                                | 76-44-8              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Aldrin                                                    | 309-00-2             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Heptachlor epoxide                                        | 1024-57-3            | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| ^ Total Chlordane (sum)                                   | ----                 | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| trans-Chlordane                                           | 5103-74-2            | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| alpha-Endosulfan                                          | 959-98-8             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| cis-Chlordane                                             | 5103-71-9            | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Dieldrin                                                  | 60-57-1              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| 4,4'-DDE                                                  | 72-55-9              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Endrin                                                    | 72-20-8              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| beta-Endosulfan                                           | 33213-65-9           | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| ^ Endosulfan (sum)                                        | 115-29-7             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| 4,4'-DDD                                                  | 72-54-8              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Endrin aldehyde                                           | 7421-93-4            | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Endosulfan sulfate                                        | 1031-07-8            | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| 4,4'-DDT                                                  | 50-29-3              | 0.2  | mg/kg | <0.2              | <0.2              | <0.2              | <0.2              | ----              |
| Endrin ketone                                             | 53494-70-5           | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Methoxychlor                                              | 72-43-5              | 0.2  | mg/kg | <0.2              | <0.2              | <0.2              | <0.2              | ----              |
| ^ Sum of Aldrin + Dieldrin                                | 309-00-2/60-57-1     | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| ^ Sum of DDD + DDE + DDT                                  | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| <b>EP068B: Organophosphorus Pesticides (OP)</b>           |                      |      |       |                   |                   |                   |                   |                   |
| Dichlorvos                                                | 62-73-7              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Demeton-S-methyl                                          | 919-86-8             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Monocrotophos                                             | 6923-22-4            | 0.2  | mg/kg | <0.2              | <0.2              | <0.2              | <0.2              | ----              |
| Dimethoate                                                | 60-51-5              | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Diazinon                                                  | 333-41-5             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Chlorpyrifos-methyl                                       | 5598-13-0            | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Parathion-methyl                                          | 298-00-0             | 0.2  | mg/kg | <0.2              | <0.2              | <0.2              | <0.2              | ----              |
| Malathion                                                 | 121-75-5             | 0.05 | mg/kg | <0.05             | <0.05             | <0.05             | <0.05             | ----              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                          |                   |      |       | Client sample ID | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2          |
|-------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       |                  | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |
| Compound                                                    | CAS Number        | LOR  | Unit  |                  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |
|                                                             |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| Fenthion                                                    | 55-38-9           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Chlorpyrifos                                                | 2921-88-2         | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Parathion                                                   | 56-38-2           | 0.2  | mg/kg |                  | <0.2              | <0.2              | <0.2              | <0.2              | ----              |
| Pirimphos-ethyl                                             | 23505-41-1        | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Chlorfenvinphos                                             | 470-90-6          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Bromophos-ethyl                                             | 4824-78-6         | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Fenamiphos                                                  | 22224-92-6        | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Prothiofos                                                  | 34643-46-4        | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg |                  | <0.05             | <0.05             | <0.05             | <0.05             | ----              |
| <b>EP074A: Monocyclic Aromatic Hydrocarbons</b>             |                   |      |       |                  |                   |                   |                   |                   |                   |
| Benzene                                                     | 71-43-2           | 0.2  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.2              |
| Toluene                                                     | 108-88-3          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Ethylbenzene                                                | 100-41-4          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| meta- & para-Xylene                                         | 108-38-3 106-42-3 | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Styrene                                                     | 100-42-5          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| ortho-Xylene                                                | 95-47-6           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| ^ Sum of monocyclic aromatic hydrocarbons                   | ----              | 0.2  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.2              |
| ^ Total Xylenes                                             | ----              | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| <b>EP074H: Naphthalene</b>                                  |                   |      |       |                  |                   |                   |                   |                   |                   |
| Naphthalene                                                 | 91-20-3           | 1    | mg/kg |                  | ----              | ----              | ----              | ----              | <1                |
| <b>EP074I: Volatile Halogenated Compounds</b>               |                   |      |       |                  |                   |                   |                   |                   |                   |
| Vinyl chloride                                              | 75-01-4           | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| 1,1-Dichloroethene                                          | 75-35-4           | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| Methylene chloride                                          | 75-09-2           | 0.4  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.4              |
| trans-1,2-Dichloroethene                                    | 156-60-5          | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| cis-1,2-Dichloroethene                                      | 156-59-2          | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| Chloroform                                                  | 67-66-3           | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| 1,1,1-Trichloroethane                                       | 71-55-6           | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| Carbon Tetrachloride                                        | 56-23-5           | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| 1,2-Dichloroethane                                          | 107-06-2          | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| Trichloroethene                                             | 79-01-6           | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                        |            |      |       | Client sample ID | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2          |
|-----------------------------------------------------------|------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |            |      |       |                  | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |
| Compound                                                  | CAS Number | LOR  | Unit  |                  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |
|                                                           |            |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP074I: Volatile Halogenated Compounds - Continued</b> |            |      |       |                  |                   |                   |                   |                   |                   |
| 1.1.2-Trichloroethane                                     | 79-00-5    | 0.04 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.04             |
| Tetrachloroethene                                         | 127-18-4   | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| 1.1.1.2-Tetrachloroethane                                 | 630-20-6   | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| 1.1.2.2-Tetrachloroethane                                 | 79-34-5    | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| Hexachlorobutadiene                                       | 87-68-3    | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| Chlorobenzene                                             | 108-90-7   | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| 1.4-Dichlorobenzene                                       | 106-46-7   | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| 1.2-Dichlorobenzene                                       | 95-50-1    | 0.02 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.02             |
| 1.2.4-Trichlorobenzene                                    | 120-82-1   | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| ^ Sum of volatile chlorinated hydrocarbons                | ----       | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| ^ Sum of other chlorinated hydrocarbons                   | ----       | 0.01 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.01             |
| <b>EP075(SIM)A: Phenolic Compounds</b>                    |            |      |       |                  |                   |                   |                   |                   |                   |
| Phenol                                                    | 108-95-2   | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 2-Chlorophenol                                            | 95-57-8    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 2-Methylphenol                                            | 95-48-7    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 3- & 4-Methylphenol                                       | 1319-77-3  | 1    | mg/kg |                  | <1                | <1                | <1                | <1                | ----              |
| 2-Nitrophenol                                             | 88-75-5    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 2.4-Dimethylphenol                                        | 105-67-9   | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 2.4-Dichlorophenol                                        | 120-83-2   | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 2.6-Dichlorophenol                                        | 87-65-0    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 4-Chloro-3-methylphenol                                   | 59-50-7    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 2.4.6-Trichlorophenol                                     | 88-06-2    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| 2.4.5-Trichlorophenol                                     | 95-95-4    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Pentachlorophenol                                         | 87-86-5    | 2    | mg/kg |                  | <2                | <2                | <2                | <2                | ----              |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>     |            |      |       |                  |                   |                   |                   |                   |                   |
| Naphthalene                                               | 91-20-3    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Acenaphthylene                                            | 208-96-8   | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Acenaphthene                                              | 83-32-9    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Fluorene                                                  | 86-73-7    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Phenanthrene                                              | 85-01-8    | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Anthracene                                                | 120-12-7   | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Fluoranthene                                              | 206-44-0   | 0.5  | mg/kg |                  | <0.5              | <0.5              | <0.5              | <0.5              | ----              |
| Pyrene                                                    | 129-00-0   | 0.5  | mg/kg |                  | <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              | ----              |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                   |                   |      |       | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2          |
|-------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                       |                   |      |       | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |
| Compound                                                          | CAS Number        | LOR  | Unit  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |
|                                                                   |                   |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b> |                   |      |       |                   |                   |                   |                   |                   |
| Chrysene                                                          | 218-01-9          | 0.5  | mg/kg | <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              | ----              |
| Benzo(k)fluoranthene                                              | 207-08-9          | 0.5  | mg/kg | <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              | ----              |
| Indeno(1.2.3.cd)pyrene                                            | 193-39-5          | 0.5  | mg/kg | <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              | ----              |
| Benzo(g.h.i)perylene                                              | 191-24-2          | 0.5  | mg/kg | <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              | ----              |
| ^ Benzo(a)pyrene TEQ (zero)                                       | ----              | 0.5  | mg/kg | <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               | ----              |
| ^ Benzo(a)pyrene TEQ (LOR)                                        | ----              | 0.5  | mg/kg | 1.2               | 1.2               | 1.2               | 1.2               | ----              |
| <b>EP075A: Phenolic Compounds (Halogenated)</b>                   |                   |      |       |                   |                   |                   |                   |                   |
| 2-Chlorophenol                                                    | 95-57-8           | 0.03 | mg/kg | ----              | ----              | ----              | ----              | <0.03             |
| 2,4-Dichlorophenol                                                | 120-83-2          | 0.03 | mg/kg | ----              | ----              | ----              | ----              | <0.03             |
| 2,6-Dichlorophenol                                                | 87-65-0           | 0.03 | mg/kg | ----              | ----              | ----              | ----              | <0.03             |
| 4-Chloro-3-methylphenol                                           | 59-50-7           | 0.03 | mg/kg | ----              | ----              | ----              | ----              | <0.03             |
| 2,4,5-Trichlorophenol                                             | 95-95-4           | 0.05 | mg/kg | ----              | ----              | ----              | ----              | <0.05             |
| 2,4,6-Trichlorophenol                                             | 88-06-2           | 0.05 | mg/kg | ----              | ----              | ----              | ----              | <0.05             |
| 2,3,5,6-Tetrachlorophenol                                         | 935-95-5          | 0.03 | mg/kg | ----              | ----              | ----              | ----              | <0.03             |
| 2,3,4,5 & 2,3,4,6-Tetrachlorophenol                               | 4901-51-3/58-90-2 | 0.05 | mg/kg | ----              | ----              | ----              | ----              | <0.05             |
| Pentachlorophenol                                                 | 87-86-5           | 0.2  | mg/kg | ----              | ----              | ----              | ----              | <0.2              |
| ^ Sum of Phenols (halogenated)                                    | ----              | 0.03 | mg/kg | ----              | ----              | ----              | ----              | <0.03             |
| <b>EP075A: Phenolic Compounds (Non-halogenated)</b>               |                   |      |       |                   |                   |                   |                   |                   |
| Phenol                                                            | 108-95-2          | 1    | mg/kg | ----              | ----              | ----              | ----              | <1                |
| 2-Methylphenol                                                    | 95-48-7           | 1    | mg/kg | ----              | ----              | ----              | ----              | <1                |
| 3- & 4-Methylphenol                                               | 1319-77-3         | 1    | mg/kg | ----              | ----              | ----              | ----              | <1                |
| 2-Nitrophenol                                                     | 88-75-5           | 1    | mg/kg | ----              | ----              | ----              | ----              | <1                |
| 2,4-Dimethylphenol                                                | 105-67-9          | 1    | mg/kg | ----              | ----              | ----              | ----              | <1                |
| 2,4-Dinitrophenol                                                 | 51-28-5           | 5    | mg/kg | ----              | ----              | ----              | ----              | <5                |
| 4-Nitrophenol                                                     | 100-02-7          | 5    | mg/kg | ----              | ----              | ----              | ----              | <5                |
| 2-Methyl-4,6-dinitrophenol                                        | 8071-51-0         | 5    | mg/kg | ----              | ----              | ----              | ----              | <5                |
| Dinoseb                                                           | 88-85-7           | 5    | mg/kg | ----              | ----              | ----              | ----              | <5                |
| 2-Cyclohexyl-4,6-Dinitrophenol                                    | 131-89-5          | 5    | mg/kg | ----              | ----              | ----              | ----              | <5                |
| ^ Sum of Phenols (non-halogenated)                                | ----              | 1    | mg/kg | ----              | ----              | ----              | ----              | <1                |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                              |                   |      |       | Client sample ID | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2          |
|-----------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                     |                   |      |       |                  | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |
| Compound                                                        | CAS Number        | LOR  | Unit  |                  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |
|                                                                 |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| <b>EP075B: Polynuclear Aromatic Hydrocarbons</b>                |                   |      |       |                  |                   |                   |                   |                   |                   |
| Naphthalene                                                     | 91-20-3           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Acenaphthene                                                    | 83-32-9           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Acenaphthylene                                                  | 208-96-8          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Fluorene                                                        | 86-73-7           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Phenanthrene                                                    | 85-01-8           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Anthracene                                                      | 120-12-7          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Fluoranthene                                                    | 206-44-0          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Pyrene                                                          | 129-00-0          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Benz(a)anthracene                                               | 56-55-3           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Chrysene                                                        | 218-01-9          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Benzo(b+j) &<br>Benzo(k)fluoranthene                            | 205-99-2 207-08-9 | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Benzo(a)pyrene                                                  | 50-32-8           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Indeno(1.2.3.cd)pyrene                                          | 193-39-5          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Dibenz(a,h)anthracene                                           | 53-70-3           | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| Benzo(g,h,i)perylene                                            | 191-24-2          | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| ^ Sum of polycyclic aromatic hydrocarbons                       | ----              | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| ^ Benzo(a)pyrene TEQ (zero)                                     | ----              | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <0.5              |
| ^ Benzo(a)pyrene TEQ (half LOR)                                 | ----              | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <b>0.6</b>        |
| ^ Benzo(a)pyrene TEQ (LOR)                                      | ----              | 0.5  | mg/kg |                  | ----              | ----              | ----              | ----              | <b>1.2</b>        |
| <b>EP075I: Organochlorine Pesticides</b>                        |                   |      |       |                  |                   |                   |                   |                   |                   |
| alpha-BHC                                                       | 319-84-6          | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Hexachlorobenzene (HCB)                                         | 118-74-1          | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| beta-BHC                                                        | 319-85-7          | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| gamma-BHC                                                       | 58-89-9           | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| delta-BHC                                                       | 319-86-8          | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Heptachlor                                                      | 76-44-8           | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Aldrin                                                          | 309-00-2          | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Heptachlor epoxide                                              | 1024-57-3         | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| cis-Chlordane                                                   | 5103-71-9         | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| trans-Chlordane                                                 | 5103-74-2         | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Endosulfan 1                                                    | 959-98-8          | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| 4,4'-DDE                                                        | 72-55-9           | 0.05 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.05             |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                     |                      |      |       | Client sample ID | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2          |
|------------------------------------------------------------------------|----------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                      |      |       |                  | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |
| Compound                                                               | CAS Number           | LOR  | Unit  |                  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |
|                                                                        |                      |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075I: Organochlorine Pesticides - Continued</b>                   |                      |      |       |                  |                   |                   |                   |                   |                   |
| Dieldrin                                                               | 60-57-1              | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Endrin aldehyde                                                        | 7421-93-4            | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Endrin                                                                 | 72-20-8              | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| Endosulfan 2                                                           | 33213-65-9           | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| 4,4`-DDD                                                               | 72-54-8              | 0.05 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.05             |
| Endosulfan sulfate                                                     | 1031-07-8            | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| 4,4`-DDT                                                               | 50-29-3              | 0.05 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.05             |
| Methoxychlor                                                           | 72-43-5              | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| ^ Sum of organochlorine pesticides                                     | ----                 | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| ^ Sum of Aldrin + Dieldrin                                             | 309-00-2/60-57-1     | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| ^ Sum of DDD + DDE + DDT                                               | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.05             |
| ^ Chlordane                                                            | 57-74-9              | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| ^ Sum of other organochlorine pesticides                               | ----                 | 0.03 | mg/kg |                  | ----              | ----              | ----              | ----              | <0.03             |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                      |      |       |                  |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg |                  | <10               | <10               | <10               | <10               | ----              |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg |                  | ----              | ----              | ----              | ----              | <10               |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg |                  | <50               | <50               | <50               | <50               | ----              |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg |                  | ----              | ----              | ----              | ----              | <50               |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg |                  | ----              | ----              | ----              | ----              | <10               |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg |                  | 1190              | <100              | <100              | <100              | ----              |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg |                  | ----              | ----              | ----              | ----              | 110               |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg |                  | 920               | 140               | <100              | <100              | ----              |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg |                  | ----              | ----              | ----              | ----              | 160               |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg |                  | 2110              | 140               | <50               | <50               | ----              |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg |                  | ----              | ----              | ----              | ----              | 270               |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                      |      |       |                  |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg |                  | <10               | <10               | <10               | <10               | ----              |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX          | 10   | mg/kg |                  | <10               | <10               | <10               | <10               | ----              |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg |                  | <50               | <50               | <50               | <50               | ----              |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg |                  | ----              | ----              | ----              | ----              | <50               |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg |                  | 1980              | 200               | <100              | 120               | ----              |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg |                  | ----              | ----              | ----              | ----              | 240               |
| >C34 - C40 Fraction                                                    | ----                 | 100  | mg/kg |                  | 240               | <100              | <100              | <100              | ----              |

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                          |                   |      |       | Client sample ID  | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2 |
|-----------------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|----------|
| Client sampling date / time                                                 |                   |      |       | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |          |
| Compound                                                                    | CAS Number        | LOR  | Unit  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |          |
|                                                                             |                   |      |       | Result            | Result            | Result            | Result            | Result            |          |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued |                   |      |       |                   |                   |                   |                   |                   |          |
| >C34 - C40 Fraction                                                         | ----              | 100  | mg/kg | ----              | ----              | ----              | ----              | <100              |          |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | 2220              | 200               | <50               | 120               | ----              |          |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | ----              | ----              | ----              | ----              | 240               |          |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                                | ----              | 50   | mg/kg | <50               | <50               | <50               | <50               | ----              |          |
| >C10 - C16 Fraction minus Naphthalene (F2)                                  | ----              | 50   | mg/kg | ----              | ----              | ----              | ----              | <50               |          |
| C6 - C10 Fraction minus BTEX (F1)                                           | C6_C10-BTEX       | 10   | mg/kg | ----              | ----              | ----              | ----              | <10               |          |
| EP080: BTEXN                                                                |                   |      |       |                   |                   |                   |                   |                   |          |
| Benzene                                                                     | 71-43-2           | 0.2  | mg/kg | <0.2              | <0.2              | <0.2              | <0.2              | ----              |          |
| Toluene                                                                     | 108-88-3          | 0.5  | mg/kg | <0.5              | <0.5              | <0.5              | <0.5              | ----              |          |
| Ethylbenzene                                                                | 100-41-4          | 0.5  | mg/kg | <0.5              | <0.5              | <0.5              | <0.5              | ----              |          |
| meta- & para-Xylene                                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | <0.5              | <0.5              | <0.5              | <0.5              | ----              |          |
| ortho-Xylene                                                                | 95-47-6           | 0.5  | mg/kg | <0.5              | <0.5              | <0.5              | <0.5              | ----              |          |
| ^ Sum of BTEX                                                               | ----              | 0.2  | mg/kg | <0.2              | <0.2              | <0.2              | <0.2              | ----              |          |
| ^ Total Xylenes                                                             | ----              | 0.5  | mg/kg | <0.5              | <0.5              | <0.5              | <0.5              | ----              |          |
| Naphthalene                                                                 | 91-20-3           | 1    | mg/kg | <1                | <1                | <1                | <1                | ----              |          |
| EP066S: PCB Surrogate                                                       |                   |      |       |                   |                   |                   |                   |                   |          |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | ----              | ----              | ----              | ----              | 106               |          |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | 99.2              | 93.0              | 93.3              | 94.6              | ----              |          |
| EP068S: Organochlorine Pesticide Surrogate                                  |                   |      |       |                   |                   |                   |                   |                   |          |
| Dibromo-DDE                                                                 | 21655-73-2        | 0.05 | %     | 93.9              | 97.9              | 98.1              | 104               | ----              |          |
| EP068T: Organophosphorus Pesticide Surrogate                                |                   |      |       |                   |                   |                   |                   |                   |          |
| DEF                                                                         | 78-48-8           | 0.05 | %     | 91.5              | 93.1              | 98.2              | 98.2              | ----              |          |
| EP074S: VOC Surrogates (Ultra-Trace)                                        |                   |      |       |                   |                   |                   |                   |                   |          |
| 1,2-Dichloroethane-D4                                                       | 17060-07-0        | 0.1  | %     | ----              | ----              | ----              | ----              | 85.8              |          |
| Toluene-D8                                                                  | 2037-26-5         | 0.1  | %     | ----              | ----              | ----              | ----              | 80.0              |          |
| 4-Bromofluorobenzene                                                        | 460-00-4          | 0.1  | %     | ----              | ----              | ----              | ----              | 85.9              |          |
| EP075(SIM)S: Phenolic Compound Surrogates                                   |                   |      |       |                   |                   |                   |                   |                   |          |
| Phenol-d6                                                                   | 13127-88-3        | 0.5  | %     | 99.5              | 98.5              | 98.7              | 101               | ----              |          |
| 2-Chlorophenol-D4                                                           | 93951-73-6        | 0.5  | %     | 97.7              | 97.8              | 94.6              | 98.7              | ----              |          |
| 2,4,6-Tribromophenol                                                        | 118-79-6          | 0.5  | %     | 91.2              | 94.6              | 92.7              | 93.1              | ----              |          |
| EP075(SIM)T: PAH Surrogates                                                 |                   |      |       |                   |                   |                   |                   |                   |          |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                        |            |       |      | Client sample ID | TP01_0.5          | TP02_0.1          | TP02_0.5          | TP03_0.1          | TP04_0.2          |
|---------------------------------------------------------------------------|------------|-------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                               |            |       |      |                  | 22-Jan-2019 07:30 | 22-Jan-2019 09:00 | 22-Jan-2019 09:10 | 22-Jan-2019 09:40 | 22-Jan-2019 13:00 |
| Compound                                                                  | CAS Number | LOR   | Unit |                  | EM1900929-001     | EM1900929-003     | EM1900929-004     | EM1900929-006     | EM1900929-009     |
|                                                                           |            |       |      |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)T: PAH Surrogates - Continued</b>                            |            |       |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.5   | %    |                  | 105               | 104               | 101               | 104               | ----              |
| Anthracene-d10                                                            | 1719-06-8  | 0.5   | %    |                  | 108               | 106               | 104               | 107               | ----              |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.5   | %    |                  | 105               | 103               | 102               | 106               | ----              |
| <b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>         |            |       |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                                                 | 13127-88-3 | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 102               |
| 2-Chlorophenol-D4                                                         | 93951-73-6 | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 81.1              |
| 2,4,6-Tribromophenol                                                      | 118-79-6   | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 95.3              |
| <b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b> |            |       |      |                  |                   |                   |                   |                   |                   |
| Nitrobenzene-D5                                                           | 4165-60-0  | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 116               |
| 1,2-Dichlorobenzene-D4                                                    | 2199-69-1  | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 89.8              |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 102               |
| Anthracene-d10                                                            | 1719-06-8  | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 95.8              |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.025 | %    |                  | ----              | ----              | ----              | ----              | 106               |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>                                     |            |       |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                                                     | 17060-07-0 | 0.2   | %    |                  | 73.6              | 74.1              | 77.8              | 74.7              | ----              |
| Toluene-D8                                                                | 2037-26-5  | 0.2   | %    |                  | 75.1              | 76.6              | 83.0              | 78.7              | ----              |
| 4-Bromofluorobenzene                                                      | 460-00-4   | 0.2   | %    |                  | 106               | 112               | 118               | 111               | ----              |



| Sub-Matrix: SOIL<br>(Matrix: SOIL)                        |            |      |         | Client sample ID  | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1 |
|-----------------------------------------------------------|------------|------|---------|-------------------|-------------------|-------------------|-------------------|-------------------|----------|
| Client sampling date / time                               |            |      |         | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |          |
| Compound                                                  | CAS Number | LOR  | Unit    | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |          |
|                                                           |            |      |         | Result            | Result            | Result            | Result            | Result            |          |
| EA001: pH in soil using 0.01M CaCl extract                |            |      |         |                   |                   |                   |                   |                   |          |
| pH (CaCl2)                                                | ----       | 0.1  | pH Unit | 7.3               | ----              | ----              | 4.2               | 4.4               |          |
| EA055: Moisture Content (Dried @ 105-110°C)               |            |      |         |                   |                   |                   |                   |                   |          |
| Moisture Content                                          | ----       | 1.0  | %       | 4.4               | 15.1              | 10.5              | 10.8              | 10.3              |          |
| EA200: AS 4964 - 2004 Identification of Asbestos in Soils |            |      |         |                   |                   |                   |                   |                   |          |
| Asbestos Detected                                         | 1332-21-4  | 0.1  | g/kg    | No                | No                | No                | No                | No                |          |
| Asbestos (Trace)                                          | 1332-21-4  | 5    | Fibres  | No                | No                | No                | No                | No                |          |
| Asbestos Type                                             | 1332-21-4  | -    | --      | -                 | -                 | -                 | -                 | -                 |          |
| Sample weight (dry)                                       | ----       | 0.01 | g       | 8.50              | 13.7              | 19.4              | 12.3              | 24.0              |          |
| APPROVED IDENTIFIER:                                      | ----       | -    | --      | V.PHUNG           | V.PHUNG           | V.PHUNG           | V.PHUNG           | V.PHUNG           |          |
| Synthetic Mineral Fibre                                   | ----       | 0.1  | g/kg    | No                | No                | No                | No                | No                |          |
| Organic Fibre                                             | ----       | 0.1  | g/kg    | No                | Yes               | Yes               | Yes               | Yes               |          |
| EG005T: Total Metals by ICP-AES                           |            |      |         |                   |                   |                   |                   |                   |          |
| Arsenic                                                   | 7440-38-2  | 5    | mg/kg   | <5                | ----              | ----              | <5                | <5                |          |
| Cadmium                                                   | 7440-43-9  | 1    | mg/kg   | <1                | ----              | ----              | <1                | <1                |          |
| Copper                                                    | 7440-50-8  | 5    | mg/kg   | 28                | ----              | ----              | 10                | 9                 |          |
| Lead                                                      | 7439-92-1  | 5    | mg/kg   | 72                | ----              | ----              | 11                | 12                |          |
| Molybdenum                                                | 7439-98-7  | 2    | mg/kg   | <2                | ----              | ----              | 5                 | <2                |          |
| Nickel                                                    | 7440-02-0  | 2    | mg/kg   | 47                | ----              | ----              | 7                 | 5                 |          |
| Selenium                                                  | 7782-49-2  | 5    | mg/kg   | <5                | ----              | ----              | <5                | <5                |          |
| Silver                                                    | 7440-22-4  | 2    | mg/kg   | <2                | ----              | ----              | <2                | <2                |          |
| Tin                                                       | 7440-31-5  | 5    | mg/kg   | <5                | ----              | ----              | <5                | <5                |          |
| Zinc                                                      | 7440-66-6  | 5    | mg/kg   | 126               | ----              | ----              | 20                | 20                |          |
| EG035T: Total Recoverable Mercury by FIMS                 |            |      |         |                   |                   |                   |                   |                   |          |
| Mercury                                                   | 7439-97-6  | 0.1  | mg/kg   | <0.1              | ----              | ----              | <0.1              | <0.1              |          |
| EG048: Hexavalent Chromium (Alkaline Digest)              |            |      |         |                   |                   |                   |                   |                   |          |
| Hexavalent Chromium                                       | 18540-29-9 | 0.5  | mg/kg   | <0.5              | ----              | ----              | <0.5              | <0.5              |          |
| EK026SF: Total CN by Segmented Flow Analyser              |            |      |         |                   |                   |                   |                   |                   |          |
| Total Cyanide                                             | 57-12-5    | 1    | mg/kg   | <1                | ----              | ----              | 3                 | 2                 |          |
| EK040T: Fluoride Total                                    |            |      |         |                   |                   |                   |                   |                   |          |
| Fluoride                                                  | 16984-48-8 | 40   | mg/kg   | 180               | ----              | ----              | 150               | 200               |          |
| EP066: Polychlorinated Biphenyls (PCB)                    |            |      |         |                   |                   |                   |                   |                   |          |
| Total Polychlorinated biphenyls                           | ----       | 0.1  | mg/kg   | <0.1              | ----              | ----              | <0.1              | <0.1              |          |
| Total Polychlorinated biphenyls                           | ----       | 0.1  | mg/kg   | ----              | <0.1              | <0.1              | ----              | ----              |          |
| EP068A: Organochlorine Pesticides (OC)                    |            |      |         |                   |                   |                   |                   |                   |          |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                           |                      |      |       | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1          |
|-----------------------------------------------------------|----------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |                      |      |       | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |
| Compound                                                  | CAS Number           | LOR  | Unit  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |
|                                                           |                      |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP068A: Organochlorine Pesticides (OC) - Continued</b> |                      |      |       |                   |                   |                   |                   |                   |
| alpha-BHC                                                 | 319-84-6             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Hexachlorobenzene (HCB)                                   | 118-74-1             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| beta-BHC                                                  | 319-85-7             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| gamma-BHC                                                 | 58-89-9              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| delta-BHC                                                 | 319-86-8             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Heptachlor                                                | 76-44-8              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Aldrin                                                    | 309-00-2             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Heptachlor epoxide                                        | 1024-57-3            | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| ^ Total Chlordane (sum)                                   | ----                 | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| trans-Chlordane                                           | 5103-74-2            | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| alpha-Endosulfan                                          | 959-98-8             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| cis-Chlordane                                             | 5103-71-9            | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Dieldrin                                                  | 60-57-1              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| 4,4'-DDE                                                  | 72-55-9              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Endrin                                                    | 72-20-8              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| beta-Endosulfan                                           | 33213-65-9           | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| ^ Endosulfan (sum)                                        | 115-29-7             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| 4,4'-DDD                                                  | 72-54-8              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Endrin aldehyde                                           | 7421-93-4            | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Endosulfan sulfate                                        | 1031-07-8            | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| 4,4'-DDT                                                  | 50-29-3              | 0.2  | mg/kg | ----              | <0.2              | <0.2              | ----              | ----              |
| Endrin ketone                                             | 53494-70-5           | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Methoxychlor                                              | 72-43-5              | 0.2  | mg/kg | ----              | <0.2              | <0.2              | ----              | ----              |
| ^ Sum of Aldrin + Dieldrin                                | 309-00-2/60-57-1     | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| ^ Sum of DDD + DDE + DDT                                  | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| <b>EP068B: Organophosphorus Pesticides (OP)</b>           |                      |      |       |                   |                   |                   |                   |                   |
| Dichlorvos                                                | 62-73-7              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Demeton-S-methyl                                          | 919-86-8             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Monocrotophos                                             | 6923-22-4            | 0.2  | mg/kg | ----              | <0.2              | <0.2              | ----              | ----              |
| Dimethoate                                                | 60-51-5              | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Diazinon                                                  | 333-41-5             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Chlorpyrifos-methyl                                       | 5598-13-0            | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Parathion-methyl                                          | 298-00-0             | 0.2  | mg/kg | ----              | <0.2              | <0.2              | ----              | ----              |
| Malathion                                                 | 121-75-5             | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                             |                   |      |       | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1          |
|-------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |
| Compound                                                    | CAS Number        | LOR  | Unit  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |
|                                                             |                   |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                   |                   |                   |                   |                   |
| Fenthion                                                    | 55-38-9           | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Chlorpyrifos                                                | 2921-88-2         | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Parathion                                                   | 56-38-2           | 0.2  | mg/kg | ----              | <0.2              | <0.2              | ----              | ----              |
| Pirimphos-ethyl                                             | 23505-41-1        | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Chlorfenvinphos                                             | 470-90-6          | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Bromophos-ethyl                                             | 4824-78-6         | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Fenamiphos                                                  | 22224-92-6        | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Prothiofos                                                  | 34643-46-4        | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg | ----              | <0.05             | <0.05             | ----              | ----              |
| <b>EP074A: Monocyclic Aromatic Hydrocarbons</b>             |                   |      |       |                   |                   |                   |                   |                   |
| Benzene                                                     | 71-43-2           | 0.2  | mg/kg | <0.2              | ----              | ----              | <0.2              | <0.2              |
| Toluene                                                     | 108-88-3          | 0.5  | mg/kg | <0.5              | ----              | ----              | <0.5              | <0.5              |
| Ethylbenzene                                                | 100-41-4          | 0.5  | mg/kg | <0.5              | ----              | ----              | <0.5              | <0.5              |
| meta- & para-Xylene                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | <0.5              | ----              | ----              | <0.5              | <0.5              |
| Styrene                                                     | 100-42-5          | 0.5  | mg/kg | <0.5              | ----              | ----              | <0.5              | <0.5              |
| ortho-Xylene                                                | 95-47-6           | 0.5  | mg/kg | <0.5              | ----              | ----              | <0.5              | <0.5              |
| ^ Sum of monocyclic aromatic hydrocarbons                   | ----              | 0.2  | mg/kg | <0.2              | ----              | ----              | <0.2              | <0.2              |
| ^ Total Xylenes                                             | ----              | 0.5  | mg/kg | <0.5              | ----              | ----              | <0.5              | <0.5              |
| <b>EP074H: Naphthalene</b>                                  |                   |      |       |                   |                   |                   |                   |                   |
| Naphthalene                                                 | 91-20-3           | 1    | mg/kg | <1                | ----              | ----              | <1                | <1                |
| <b>EP074I: Volatile Halogenated Compounds</b>               |                   |      |       |                   |                   |                   |                   |                   |
| Vinyl chloride                                              | 75-01-4           | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| 1,1-Dichloroethene                                          | 75-35-4           | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| Methylene chloride                                          | 75-09-2           | 0.4  | mg/kg | <0.4              | ----              | ----              | <0.4              | <0.4              |
| trans-1,2-Dichloroethene                                    | 156-60-5          | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| cis-1,2-Dichloroethene                                      | 156-59-2          | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| Chloroform                                                  | 67-66-3           | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| 1,1,1-Trichloroethane                                       | 71-55-6           | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| Carbon Tetrachloride                                        | 56-23-5           | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| 1,2-Dichloroethane                                          | 107-06-2          | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| Trichloroethene                                             | 79-01-6           | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                           |            |      |       | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1          |
|-----------------------------------------------------------|------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |            |      |       | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |
| Compound                                                  | CAS Number | LOR  | Unit  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |
|                                                           |            |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP074I: Volatile Halogenated Compounds - Continued</b> |            |      |       |                   |                   |                   |                   |                   |
| 1.1.2-Trichloroethane                                     | 79-00-5    | 0.04 | mg/kg | <0.04             | ----              | ----              | <0.04             | <0.04             |
| Tetrachloroethene                                         | 127-18-4   | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| 1.1.1.2-Tetrachloroethane                                 | 630-20-6   | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| 1.1.2.2-Tetrachloroethane                                 | 79-34-5    | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| Hexachlorobutadiene                                       | 87-68-3    | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| Chlorobenzene                                             | 108-90-7   | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| 1.4-Dichlorobenzene                                       | 106-46-7   | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| 1.2-Dichlorobenzene                                       | 95-50-1    | 0.02 | mg/kg | <0.02             | ----              | ----              | <0.02             | <0.02             |
| 1.2.4-Trichlorobenzene                                    | 120-82-1   | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| <sup>^</sup> Sum of volatile chlorinated hydrocarbons     | ----       | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| <sup>^</sup> Sum of other chlorinated hydrocarbons        | ----       | 0.01 | mg/kg | <0.01             | ----              | ----              | <0.01             | <0.01             |
| <b>EP075(SIM)A: Phenolic Compounds</b>                    |            |      |       |                   |                   |                   |                   |                   |
| Phenol                                                    | 108-95-2   | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 2-Chlorophenol                                            | 95-57-8    | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 2-Methylphenol                                            | 95-48-7    | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 3- & 4-Methylphenol                                       | 1319-77-3  | 1    | mg/kg | ----              | <1                | <1                | ----              | ----              |
| 2-Nitrophenol                                             | 88-75-5    | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 2.4-Dimethylphenol                                        | 105-67-9   | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 2.4-Dichlorophenol                                        | 120-83-2   | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 2.6-Dichlorophenol                                        | 87-65-0    | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 4-Chloro-3-methylphenol                                   | 59-50-7    | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 2.4.6-Trichlorophenol                                     | 88-06-2    | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| 2.4.5-Trichlorophenol                                     | 95-95-4    | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |
| Pentachlorophenol                                         | 87-86-5    | 2    | mg/kg | ----              | <2                | <2                | ----              | ----              |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>     |            |      |       |                   |                   |                   |                   |                   |
| 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              | ----              | ----              |





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                   |                   |      |       | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1          |
|-------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                       |                   |      |       | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |
| Compound                                                          | CAS Number        | LOR  | Unit  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |
|                                                                   |                   |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b> |                   |      |       |                   |                   |                   |                   |                   |
| 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               | ----              | ----              |
| <b>EP075A: Phenolic Compounds (Halogenated)</b>                   |                   |      |       |                   |                   |                   |                   |                   |
| 2-Chlorophenol                                                    | 95-57-8           | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 2,4-Dichlorophenol                                                | 120-83-2          | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 2,6-Dichlorophenol                                                | 87-65-0           | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 4-Chloro-3-methylphenol                                           | 59-50-7           | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 2,4,5-Trichlorophenol                                             | 95-95-4           | 0.05 | mg/kg | <0.05             | ----              | ----              | <0.05             | <0.05             |
| 2,4,6-Trichlorophenol                                             | 88-06-2           | 0.05 | mg/kg | <0.05             | ----              | ----              | <0.05             | <0.05             |
| 2,3,5,6-Tetrachlorophenol                                         | 935-95-5          | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 2,3,4,5 & 2,3,4,6-Tetrachlorophenol                               | 4901-51-3/58-90-2 | 0.05 | mg/kg | <0.05             | ----              | ----              | <0.05             | <0.05             |
| Pentachlorophenol                                                 | 87-86-5           | 0.2  | mg/kg | <0.2              | ----              | ----              | <0.2              | <0.2              |
| ^ Sum of Phenols (halogenated)                                    | ----              | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| <b>EP075A: Phenolic Compounds (Non-halogenated)</b>               |                   |      |       |                   |                   |                   |                   |                   |
| Phenol                                                            | 108-95-2          | 1    | mg/kg | <1                | ----              | ----              | <1                | <1                |
| 2-Methylphenol                                                    | 95-48-7           | 1    | mg/kg | <1                | ----              | ----              | <1                | <1                |
| 3- & 4-Methylphenol                                               | 1319-77-3         | 1    | mg/kg | <1                | ----              | ----              | <1                | <1                |
| 2-Nitrophenol                                                     | 88-75-5           | 1    | mg/kg | <1                | ----              | ----              | <1                | <1                |
| 2,4-Dimethylphenol                                                | 105-67-9          | 1    | mg/kg | <1                | ----              | ----              | <1                | <1                |
| 2,4-Dinitrophenol                                                 | 51-28-5           | 5    | mg/kg | <5                | ----              | ----              | <5                | <5                |
| 4-Nitrophenol                                                     | 100-02-7          | 5    | mg/kg | <5                | ----              | ----              | <5                | <5                |
| 2-Methyl-4,6-dinitrophenol                                        | 8071-51-0         | 5    | mg/kg | <5                | ----              | ----              | <5                | <5                |
| Dinoseb                                                           | 88-85-7           | 5    | mg/kg | <5                | ----              | ----              | <5                | <5                |
| 2-Cyclohexyl-4,6-Dinitrophenol                                    | 131-89-5          | 5    | mg/kg | <5                | ----              | ----              | <5                | <5                |
| ^ Sum of Phenols (non-halogenated)                                | ----              | 1    | mg/kg | <1                | ----              | ----              | <1                | <1                |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                              |                   |      |       | Client sample ID | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1          |
|-----------------------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                     |                   |      |       |                  | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |
| Compound                                                        | CAS Number        | LOR  | Unit  |                  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |
|                                                                 |                   |      |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075A: Phenolic Compounds (Non-halogenated) - Continued</b> |                   |      |       |                  |                   |                   |                   |                   |                   |
| <b>EP075B: Polynuclear Aromatic Hydrocarbons</b>                |                   |      |       |                  |                   |                   |                   |                   |                   |
| Naphthalene                                                     | 91-20-3           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | <0.5              |
| Acenaphthene                                                    | 83-32-9           | 0.5  | mg/kg |                  | <0.5              | ----              | ----              | <0.5              | <0.5              |
| Acenaphthylene                                                  | 208-96-8          | 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) &<br>Benzo(k)fluoranthene                            | 205-99-2 207-08-9 | 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 |                  | <b>0.6</b>        | ----              | ----              | <b>0.6</b>        | <b>0.6</b>        |
| ^ Benzo(a)pyrene TEQ (LOR)                                      | ----              | 0.5  | mg/kg |                  | <b>1.2</b>        | ----              | ----              | <b>1.2</b>        | <b>1.2</b>        |
| <b>EP075I: Organochlorine Pesticides</b>                        |                   |      |       |                  |                   |                   |                   |                   |                   |
| alpha-BHC                                                       | 319-84-6          | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Hexachlorobenzene (HCB)                                         | 118-74-1          | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| beta-BHC                                                        | 319-85-7          | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| gamma-BHC                                                       | 58-89-9           | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| delta-BHC                                                       | 319-86-8          | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Heptachlor                                                      | 76-44-8           | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Aldrin                                                          | 309-00-2          | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Heptachlor epoxide                                              | 1024-57-3         | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| cis-Chlordane                                                   | 5103-71-9         | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| trans-Chlordane                                                 | 5103-74-2         | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Endosulfan 1                                                    | 959-98-8          | 0.03 | mg/kg |                  | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 4,4'-DDE                                                        | 72-55-9           | 0.05 | mg/kg |                  | <0.05             | ----              | ----              | <0.05             | <0.05             |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                        |                      |      |       | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1          |
|------------------------------------------------------------------------|----------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                      |      |       | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |
| Compound                                                               | CAS Number           | LOR  | Unit  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |
|                                                                        |                      |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP075I: Organochlorine Pesticides - Continued</b>                   |                      |      |       |                   |                   |                   |                   |                   |
| Dieldrin                                                               | 60-57-1              | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Endrin aldehyde                                                        | 7421-93-4            | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Endrin                                                                 | 72-20-8              | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| Endosulfan 2                                                           | 33213-65-9           | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 4,4'-DDD                                                               | 72-54-8              | 0.05 | mg/kg | <0.05             | ----              | ----              | <0.05             | <0.05             |
| Endosulfan sulfate                                                     | 1031-07-8            | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| 4,4'-DDT                                                               | 50-29-3              | 0.05 | mg/kg | <0.05             | ----              | ----              | <0.05             | <0.05             |
| Methoxychlor                                                           | 72-43-5              | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| ^ Sum of organochlorine pesticides                                     | ----                 | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| ^ Sum of Aldrin + Dieldrin                                             | 309-00-2/60-57-1     | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| ^ Sum of DDD + DDE + DDT                                               | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05             | ----              | ----              | <0.05             | <0.05             |
| ^ Chlordane                                                            | 57-74-9              | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| ^ Sum of other organochlorine pesticides                               | ----                 | 0.03 | mg/kg | <0.03             | ----              | ----              | <0.03             | <0.03             |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                      |      |       |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg | ----              | <10               | <10               | ----              | ----              |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg | <10               | ----              | ----              | <10               | <10               |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg | ----              | <50               | <50               | ----              | ----              |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg | <50               | ----              | ----              | <50               | <50               |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg | <10               | ----              | ----              | <10               | <10               |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg | ----              | <100              | <100              | ----              | ----              |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg | <100              | ----              | ----              | 160               | 170               |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg | ----              | 200               | 240               | ----              | ----              |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg | <100              | ----              | ----              | 250               | 320               |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg | ----              | 200               | 240               | ----              | ----              |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg | <50               | ----              | ----              | 410               | 490               |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                      |      |       |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg | ----              | <10               | <10               | ----              | ----              |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX          | 10   | mg/kg | ----              | <10               | <10               | ----              | ----              |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg | ----              | <50               | <50               | ----              | ----              |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg | <50               | ----              | ----              | <50               | <50               |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg | ----              | 240               | 300               | ----              | ----              |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg | <100              | ----              | ----              | 350               | 410               |
| >C34 - C40 Fraction                                                    | ----                 | 100  | mg/kg | ----              | <100              | <100              | ----              | ----              |

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                          |                   |      |       | Client sample ID  | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1 |
|-----------------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|----------|
| Client sampling date / time                                                 |                   |      |       | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |          |
| Compound                                                                    | CAS Number        | LOR  | Unit  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |          |
|                                                                             |                   |      |       | Result            | Result            | Result            | Result            | Result            |          |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued |                   |      |       |                   |                   |                   |                   |                   |          |
| >C34 - C40 Fraction                                                         | ----              | 100  | mg/kg | <100              | ----              | ----              | 100               | 140               |          |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | ----              | 240               | 300               | ----              | ----              |          |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | <50               | ----              | ----              | 450               | 550               |          |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                                | ----              | 50   | mg/kg | ----              | <50               | <50               | ----              | ----              |          |
| >C10 - C16 Fraction minus Naphthalene (F2)                                  | ----              | 50   | mg/kg | <50               | ----              | ----              | <50               | <50               |          |
| C6 - C10 Fraction minus BTEX (F1)                                           | C6_C10-BTEX       | 10   | mg/kg | <10               | ----              | ----              | <10               | <10               |          |
| EP080: BTEXN                                                                |                   |      |       |                   |                   |                   |                   |                   |          |
| Benzene                                                                     | 71-43-2           | 0.2  | mg/kg | ----              | <0.2              | <0.2              | ----              | ----              |          |
| Toluene                                                                     | 108-88-3          | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |          |
| Ethylbenzene                                                                | 100-41-4          | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |          |
| meta- & para-Xylene                                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |          |
| ortho-Xylene                                                                | 95-47-6           | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |          |
| ^ Sum of BTEX                                                               | ----              | 0.2  | mg/kg | ----              | <0.2              | <0.2              | ----              | ----              |          |
| ^ Total Xylenes                                                             | ----              | 0.5  | mg/kg | ----              | <0.5              | <0.5              | ----              | ----              |          |
| Naphthalene                                                                 | 91-20-3           | 1    | mg/kg | ----              | <1                | <1                | ----              | ----              |          |
| EP066S: PCB Surrogate                                                       |                   |      |       |                   |                   |                   |                   |                   |          |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | 114               | ----              | ----              | 118               | 104               |          |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | ----              | 95.0              | 91.0              | ----              | ----              |          |
| EP068S: Organochlorine Pesticide Surrogate                                  |                   |      |       |                   |                   |                   |                   |                   |          |
| Dibromo-DDE                                                                 | 21655-73-2        | 0.05 | %     | ----              | 104               | 101               | ----              | ----              |          |
| EP068T: Organophosphorus Pesticide Surrogate                                |                   |      |       |                   |                   |                   |                   |                   |          |
| DEF                                                                         | 78-48-8           | 0.05 | %     | ----              | 97.7              | 112               | ----              | ----              |          |
| EP074S: VOC Surrogates (Ultra-Trace)                                        |                   |      |       |                   |                   |                   |                   |                   |          |
| 1,2-Dichloroethane-D4                                                       | 17060-07-0        | 0.1  | %     | 86.0              | ----              | ----              | 81.6              | 79.6              |          |
| Toluene-D8                                                                  | 2037-26-5         | 0.1  | %     | 79.7              | ----              | ----              | 78.0              | 75.1              |          |
| 4-Bromofluorobenzene                                                        | 460-00-4          | 0.1  | %     | 85.0              | ----              | ----              | 85.0              | 78.9              |          |
| EP075(SIM)S: Phenolic Compound Surrogates                                   |                   |      |       |                   |                   |                   |                   |                   |          |
| Phenol-d6                                                                   | 13127-88-3        | 0.5  | %     | ----              | 100               | 98.7              | ----              | ----              |          |
| 2-Chlorophenol-D4                                                           | 93951-73-6        | 0.5  | %     | ----              | 99.5              | 97.4              | ----              | ----              |          |
| 2,4,6-Tribromophenol                                                        | 118-79-6          | 0.5  | %     | ----              | 97.6              | 93.6              | ----              | ----              |          |
| EP075(SIM)T: PAH Surrogates                                                 |                   |      |       |                   |                   |                   |                   |                   |          |





## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                        |            |       |      | Client sample ID | TP05_0.1          | TP06_0.1          | TP07_0.1          | TP08_0.1          | TP09_0.1          |
|---------------------------------------------------------------------------|------------|-------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                               |            |       |      |                  | 23-Jan-2019 07:10 | 23-Jan-2019 08:00 | 23-Jan-2019 08:40 | 23-Jan-2019 09:20 | 23-Jan-2019 10:00 |
| Compound                                                                  | CAS Number | LOR   | Unit |                  | EM1900929-012     | EM1900929-015     | EM1900929-018     | EM1900929-021     | EM1900929-025     |
|                                                                           |            |       |      |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)T: PAH Surrogates - Continued</b>                            |            |       |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.5   | %    |                  | ----              | 106               | 103               | ----              | ----              |
| Anthracene-d10                                                            | 1719-06-8  | 0.5   | %    |                  | ----              | 109               | 105               | ----              | ----              |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.5   | %    |                  | ----              | 108               | 103               | ----              | ----              |
| <b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>         |            |       |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                                                 | 13127-88-3 | 0.025 | %    |                  | 96.7              | ----              | ----              | 103               | 103               |
| 2-Chlorophenol-D4                                                         | 93951-73-6 | 0.025 | %    |                  | 76.8              | ----              | ----              | 81.1              | 81.6              |
| 2,4,6-Tribromophenol                                                      | 118-79-6   | 0.025 | %    |                  | 87.2              | ----              | ----              | 101               | 109               |
| <b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b> |            |       |      |                  |                   |                   |                   |                   |                   |
| Nitrobenzene-D5                                                           | 4165-60-0  | 0.025 | %    |                  | 108               | ----              | ----              | 110               | 114               |
| 1,2-Dichlorobenzene-D4                                                    | 2199-69-1  | 0.025 | %    |                  | 84.9              | ----              | ----              | 87.9              | 86.8              |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.025 | %    |                  | 99.0              | ----              | ----              | 100.0             | 107               |
| Anthracene-d10                                                            | 1719-06-8  | 0.025 | %    |                  | 95.6              | ----              | ----              | 95.6              | 104               |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.025 | %    |                  | 104               | ----              | ----              | 107               | 116               |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>                                     |            |       |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                                                     | 17060-07-0 | 0.2   | %    |                  | ----              | 77.8              | 72.1              | ----              | ----              |
| Toluene-D8                                                                | 2037-26-5  | 0.2   | %    |                  | ----              | 78.8              | 74.8              | ----              | ----              |
| 4-Bromofluorobenzene                                                      | 460-00-4   | 0.2   | %    |                  | ----              | 111               | 108               | ----              | ----              |

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                        |            |            |      | Client sample ID  |  | CS01              | CS02 | CS03              | CS04 | CS05              |  |                   |  |         |  |
|-----------------------------------------------------------|------------|------------|------|-------------------|--|-------------------|------|-------------------|------|-------------------|--|-------------------|--|---------|--|
| Client sampling date / time                               |            |            |      | 22-Jan-2019 11:00 |  | 22-Jan-2019 11:10 |      | 22-Jan-2019 11:20 |      | 22-Jan-2019 11:30 |  | 22-Jan-2019 11:40 |  |         |  |
| Compound                                                  | CAS Number | LOR        | Unit | EM1900929-028     |  | EM1900929-029     |      | EM1900929-030     |      | EM1900929-031     |  | EM1900929-032     |  |         |  |
|                                                           |            |            |      | Result            |  | Result            |      | Result            |      | Result            |  | Result            |  |         |  |
| EA001: pH in soil using 0.01M CaCl extract                |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| pH (CaCl2)                                                |            | ----       | 0.1  | pH Unit           |  | ----              |      | 5.2               |      | ----              |  | 5.3               |  | ----    |  |
| EA055: Moisture Content (Dried @ 105-110°C)               |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Moisture Content                                          |            | ----       | 1.0  | %                 |  | 17.6              |      | 17.5              |      | 15.9              |  | 12.6              |  | 12.0    |  |
| EA200: AS 4964 - 2004 Identification of Asbestos in Soils |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Asbestos Detected                                         |            | 1332-21-4  | 0.1  | g/kg              |  | No                |      | No                |      | No                |  | No                |  | No      |  |
| Asbestos (Trace)                                          |            | 1332-21-4  | 5    | Fibres            |  | No                |      | No                |      | No                |  | No                |  | No      |  |
| Asbestos Type                                             |            | 1332-21-4  | -    | --                |  | -                 |      | -                 |      | -                 |  | -                 |  | -       |  |
| Sample weight (dry)                                       |            | ----       | 0.01 | g                 |  | 8.70              |      | 7.90              |      | 8.60              |  | 16.4              |  | 12.3    |  |
| APPROVED IDENTIFIER:                                      |            | ----       | -    | --                |  | V.PHUNG           |      | V.PHUNG           |      | V.PHUNG           |  | V.PHUNG           |  | V.PHUNG |  |
| Synthetic Mineral Fibre                                   |            | ----       | 0.1  | g/kg              |  | No                |      | No                |      | No                |  | No                |  | No      |  |
| Organic Fibre                                             |            | ----       | 0.1  | g/kg              |  | Yes               |      | Yes               |      | Yes               |  | Yes               |  | Yes     |  |
| EG005T: Total Metals by ICP-AES                           |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Arsenic                                                   |            | 7440-38-2  | 5    | mg/kg             |  | ----              |      | <5                |      | ----              |  | <5                |  | ----    |  |
| Cadmium                                                   |            | 7440-43-9  | 1    | mg/kg             |  | ----              |      | <1                |      | ----              |  | <1                |  | ----    |  |
| Copper                                                    |            | 7440-50-8  | 5    | mg/kg             |  | ----              |      | 5                 |      | ----              |  | <5                |  | ----    |  |
| Lead                                                      |            | 7439-92-1  | 5    | mg/kg             |  | ----              |      | 9                 |      | ----              |  | 10                |  | ----    |  |
| Molybdenum                                                |            | 7439-98-7  | 2    | mg/kg             |  | ----              |      | <2                |      | ----              |  | <2                |  | ----    |  |
| Nickel                                                    |            | 7440-02-0  | 2    | mg/kg             |  | ----              |      | 2                 |      | ----              |  | 3                 |  | ----    |  |
| Selenium                                                  |            | 7782-49-2  | 5    | mg/kg             |  | ----              |      | <5                |      | ----              |  | <5                |  | ----    |  |
| Silver                                                    |            | 7440-22-4  | 2    | mg/kg             |  | ----              |      | <2                |      | ----              |  | <2                |  | ----    |  |
| Tin                                                       |            | 7440-31-5  | 5    | mg/kg             |  | ----              |      | <5                |      | ----              |  | <5                |  | ----    |  |
| Zinc                                                      |            | 7440-66-6  | 5    | mg/kg             |  | ----              |      | 19                |      | ----              |  | 23                |  | ----    |  |
| EG035T: Total Recoverable Mercury by FIMS                 |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Mercury                                                   |            | 7439-97-6  | 0.1  | mg/kg             |  | ----              |      | <0.1              |      | ----              |  | <0.1              |  | ----    |  |
| EG048: Hexavalent Chromium (Alkaline Digest)              |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Hexavalent Chromium                                       |            | 18540-29-9 | 0.5  | mg/kg             |  | ----              |      | <0.5              |      | ----              |  | <0.5              |  | ----    |  |
| EK026SF: Total CN by Segmented Flow Analyser              |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Total Cyanide                                             |            | 57-12-5    | 1    | mg/kg             |  | ----              |      | <1                |      | ----              |  | <1                |  | ----    |  |
| EK040T: Fluoride Total                                    |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Fluoride                                                  |            | 16984-48-8 | 40   | mg/kg             |  | ----              |      | 220               |      | ----              |  | 140               |  | ----    |  |
| EP066: Polychlorinated Biphenyls (PCB)                    |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |
| Total Polychlorinated biphenyls                           |            | ----       | 0.1  | mg/kg             |  | ----              |      | <0.1              |      | ----              |  | <0.1              |  | ----    |  |
| Total Polychlorinated biphenyls                           |            | ----       | 0.1  | mg/kg             |  | <0.1              |      | ----              |      | <0.1              |  | ----              |  | <0.1    |  |
| EP068A: Organochlorine Pesticides (OC)                    |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |         |  |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                           |                      |      |       | CS01              | CS02              | CS03              | CS04              | CS05              |
|-----------------------------------------------------------|----------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |                      |      |       | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |
| Compound                                                  | CAS Number           | LOR  | Unit  | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |
|                                                           |                      |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP068A: Organochlorine Pesticides (OC) - Continued</b> |                      |      |       |                   |                   |                   |                   |                   |
| alpha-BHC                                                 | 319-84-6             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Hexachlorobenzene (HCB)                                   | 118-74-1             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| beta-BHC                                                  | 319-85-7             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| gamma-BHC                                                 | 58-89-9              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| delta-BHC                                                 | 319-86-8             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Heptachlor                                                | 76-44-8              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Aldrin                                                    | 309-00-2             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Heptachlor epoxide                                        | 1024-57-3            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| ^ Total Chlordane (sum)                                   | ----                 | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| trans-Chlordane                                           | 5103-74-2            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| alpha-Endosulfan                                          | 959-98-8             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| cis-Chlordane                                             | 5103-71-9            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Dieldrin                                                  | 60-57-1              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| 4,4'-DDE                                                  | 72-55-9              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Endrin                                                    | 72-20-8              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| beta-Endosulfan                                           | 33213-65-9           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| ^ Endosulfan (sum)                                        | 115-29-7             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| 4,4'-DDD                                                  | 72-54-8              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Endrin aldehyde                                           | 7421-93-4            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Endosulfan sulfate                                        | 1031-07-8            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| 4,4'-DDT                                                  | 50-29-3              | 0.2  | mg/kg | <0.2              | ----              | <0.2              | ----              | <0.2              |
| Endrin ketone                                             | 53494-70-5           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Methoxychlor                                              | 72-43-5              | 0.2  | mg/kg | <0.2              | ----              | <0.2              | ----              | <0.2              |
| ^ Sum of Aldrin + Dieldrin                                | 309-00-2/60-57-1     | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| ^ Sum of DDD + DDE + DDT                                  | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| <b>EP068B: Organophosphorus Pesticides (OP)</b>           |                      |      |       |                   |                   |                   |                   |                   |
| Dichlorvos                                                | 62-73-7              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Demeton-S-methyl                                          | 919-86-8             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Monocrotophos                                             | 6923-22-4            | 0.2  | mg/kg | <0.2              | ----              | <0.2              | ----              | <0.2              |
| Dimethoate                                                | 60-51-5              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Diazinon                                                  | 333-41-5             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Chlorpyrifos-methyl                                       | 5598-13-0            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Parathion-methyl                                          | 298-00-0             | 0.2  | mg/kg | <0.2              | ----              | <0.2              | ----              | <0.2              |
| Malathion                                                 | 121-75-5             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                             |                   |      |       | CS01              | CS02              | CS03              | CS04              | CS05              |
|-------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |
| Compound                                                    | CAS Number        | LOR  | Unit  | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |
|                                                             |                   |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                   |                   |                   |                   |                   |
| Fenthion                                                    | 55-38-9           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Chlorpyrifos                                                | 2921-88-2         | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Parathion                                                   | 56-38-2           | 0.2  | mg/kg | <0.2              | ----              | <0.2              | ----              | <0.2              |
| Pirimphos-ethyl                                             | 23505-41-1        | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Chlorfenvinphos                                             | 470-90-6          | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Bromophos-ethyl                                             | 4824-78-6         | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Fenamiphos                                                  | 22224-92-6        | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Prothiofos                                                  | 34643-46-4        | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | ----              | <0.05             |
| <b>EP074A: Monocyclic Aromatic Hydrocarbons</b>             |                   |      |       |                   |                   |                   |                   |                   |
| Benzene                                                     | 71-43-2           | 0.2  | mg/kg | ----              | <0.2              | ----              | <0.2              | ----              |
| Toluene                                                     | 108-88-3          | 0.5  | mg/kg | ----              | <0.5              | ----              | <0.5              | ----              |
| Ethylbenzene                                                | 100-41-4          | 0.5  | mg/kg | ----              | <0.5              | ----              | <0.5              | ----              |
| meta- & para-Xylene                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | ----              | <0.5              | ----              | <0.5              | ----              |
| Styrene                                                     | 100-42-5          | 0.5  | mg/kg | ----              | <0.5              | ----              | <0.5              | ----              |
| ortho-Xylene                                                | 95-47-6           | 0.5  | mg/kg | ----              | <0.5              | ----              | <0.5              | ----              |
| ^ Sum of monocyclic aromatic hydrocarbons                   | ----              | 0.2  | mg/kg | ----              | <0.2              | ----              | <0.2              | ----              |
| ^ Total Xylenes                                             | ----              | 0.5  | mg/kg | ----              | <0.5              | ----              | <0.5              | ----              |
| <b>EP074H: Naphthalene</b>                                  |                   |      |       |                   |                   |                   |                   |                   |
| Naphthalene                                                 | 91-20-3           | 1    | mg/kg | ----              | <1                | ----              | <1                | ----              |
| <b>EP074I: Volatile Halogenated Compounds</b>               |                   |      |       |                   |                   |                   |                   |                   |
| Vinyl chloride                                              | 75-01-4           | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| 1,1-Dichloroethene                                          | 75-35-4           | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| Methylene chloride                                          | 75-09-2           | 0.4  | mg/kg | ----              | <0.4              | ----              | <0.4              | ----              |
| trans-1,2-Dichloroethene                                    | 156-60-5          | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| cis-1,2-Dichloroethene                                      | 156-59-2          | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| Chloroform                                                  | 67-66-3           | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| 1,1,1-Trichloroethane                                       | 71-55-6           | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| Carbon Tetrachloride                                        | 56-23-5           | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| 1,2-Dichloroethane                                          | 107-06-2          | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| Trichloroethene                                             | 79-01-6           | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                           |            |      |       | CS01              | CS02              | CS03              | CS04              | CS05              |
|-----------------------------------------------------------|------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |            |      |       | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |
| Compound                                                  | CAS Number | LOR  | Unit  | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |
|                                                           |            |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP074I: Volatile Halogenated Compounds - Continued</b> |            |      |       |                   |                   |                   |                   |                   |
| 1.1.2-Trichloroethane                                     | 79-00-5    | 0.04 | mg/kg | ----              | <0.04             | ----              | <0.04             | ----              |
| Tetrachloroethene                                         | 127-18-4   | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| 1.1.1.2-Tetrachloroethane                                 | 630-20-6   | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| 1.1.2.2-Tetrachloroethane                                 | 79-34-5    | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| Hexachlorobutadiene                                       | 87-68-3    | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| Chlorobenzene                                             | 108-90-7   | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| 1.4-Dichlorobenzene                                       | 106-46-7   | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| 1.2-Dichlorobenzene                                       | 95-50-1    | 0.02 | mg/kg | ----              | <0.02             | ----              | <0.02             | ----              |
| 1.2.4-Trichlorobenzene                                    | 120-82-1   | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| ^ Sum of volatile chlorinated hydrocarbons                | ----       | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| ^ Sum of other chlorinated hydrocarbons                   | ----       | 0.01 | mg/kg | ----              | <0.01             | ----              | <0.01             | ----              |
| <b>EP075(SIM)A: Phenolic Compounds</b>                    |            |      |       |                   |                   |                   |                   |                   |
| Phenol                                                    | 108-95-2   | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 2-Chlorophenol                                            | 95-57-8    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 2-Methylphenol                                            | 95-48-7    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 3- & 4-Methylphenol                                       | 1319-77-3  | 1    | mg/kg | <1                | ----              | <1                | ----              | <1                |
| 2-Nitrophenol                                             | 88-75-5    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 2.4-Dimethylphenol                                        | 105-67-9   | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 2.4-Dichlorophenol                                        | 120-83-2   | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 2.6-Dichlorophenol                                        | 87-65-0    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 4-Chloro-3-methylphenol                                   | 59-50-7    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 2.4.6-Trichlorophenol                                     | 88-06-2    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| 2.4.5-Trichlorophenol                                     | 95-95-4    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |
| Pentachlorophenol                                         | 87-86-5    | 2    | mg/kg | <2                | ----              | <2                | ----              | <2                |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>     |            |      |       |                   |                   |                   |                   |                   |
| 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              |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                   |                   |      |       | CS01              | CS02              | CS03              | CS04              | CS05              |
|-------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                       |                   |      |       | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |
| Compound                                                          | CAS Number        | LOR  | Unit  | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |
|                                                                   |                   |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b> |                   |      |       |                   |                   |                   |                   |                   |
| 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               |
| <b>EP075A: Phenolic Compounds (Halogenated)</b>                   |                   |      |       |                   |                   |                   |                   |                   |
| 2-Chlorophenol                                                    | 95-57-8           | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| 2,4-Dichlorophenol                                                | 120-83-2          | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| 2,6-Dichlorophenol                                                | 87-65-0           | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| 4-Chloro-3-methylphenol                                           | 59-50-7           | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| 2,4,5-Trichlorophenol                                             | 95-95-4           | 0.05 | mg/kg | ----              | <0.05             | ----              | <0.05             | ----              |
| 2,4,6-Trichlorophenol                                             | 88-06-2           | 0.05 | mg/kg | ----              | <0.05             | ----              | <0.05             | ----              |
| 2,3,5,6-Tetrachlorophenol                                         | 935-95-5          | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| 2,3,4,5 & 2,3,4,6-Tetrachlorophenol                               | 4901-51-3/58-90-2 | 0.05 | mg/kg | ----              | <0.05             | ----              | <0.05             | ----              |
| Pentachlorophenol                                                 | 87-86-5           | 0.2  | mg/kg | ----              | <0.2              | ----              | <0.2              | ----              |
| ^ Sum of Phenols (halogenated)                                    | ----              | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| <b>EP075A: Phenolic Compounds (Non-halogenated)</b>               |                   |      |       |                   |                   |                   |                   |                   |
| Phenol                                                            | 108-95-2          | 1    | mg/kg | ----              | <1                | ----              | <1                | ----              |
| 2-Methylphenol                                                    | 95-48-7           | 1    | mg/kg | ----              | <1                | ----              | <1                | ----              |
| 3- & 4-Methylphenol                                               | 1319-77-3         | 1    | mg/kg | ----              | <1                | ----              | <1                | ----              |
| 2-Nitrophenol                                                     | 88-75-5           | 1    | mg/kg | ----              | <1                | ----              | <1                | ----              |
| 2,4-Dimethylphenol                                                | 105-67-9          | 1    | mg/kg | ----              | <1                | ----              | <1                | ----              |
| 2,4-Dinitrophenol                                                 | 51-28-5           | 5    | mg/kg | ----              | <5                | ----              | <5                | ----              |
| 4-Nitrophenol                                                     | 100-02-7          | 5    | mg/kg | ----              | <5                | ----              | <5                | ----              |
| 2-Methyl-4,6-dinitrophenol                                        | 8071-51-0         | 5    | mg/kg | ----              | <5                | ----              | <5                | ----              |
| Dinoseb                                                           | 88-85-7           | 5    | mg/kg | ----              | <5                | ----              | <5                | ----              |
| 2-Cyclohexyl-4,6-Dinitrophenol                                    | 131-89-5          | 5    | mg/kg | ----              | <5                | ----              | <5                | ----              |
| ^ Sum of Phenols (non-halogenated)                                | ----              | 1    | mg/kg | ----              | <1                | ----              | <1                | ----              |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                             |            |     |      | CS01              | CS02              | CS03              | CS04              | CS05              |
|-----------------------------|------------|-----|------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time |            |     |      | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |
| Compound                    | CAS Number | LOR | Unit | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |
|                             |            |     |      | Result            | Result            | Result            | Result            | Result            |

### EP075A: Phenolic Compounds (Non-halogenated) - Continued

### EP075B: Polynuclear Aromatic Hydrocarbons

|                                           |                   |     |       |      |      |      |      |      |
|-------------------------------------------|-------------------|-----|-------|------|------|------|------|------|
| Naphthalene                               | 91-20-3           | 0.5 | mg/kg | ---- | <0.5 | ---- | <0.5 | ---- |
| Acenaphthene                              | 83-32-9           | 0.5 | mg/kg | ---- | <0.5 | ---- | <0.5 | ---- |
| Acenaphthylene                            | 208-96-8          | 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) & Benzo(k)fluoranthene         | 205-99-2 207-08-9 | 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  | ---- |

### EP075I: Organochlorine Pesticides

|                         |           |      |       |      |       |      |       |      |
|-------------------------|-----------|------|-------|------|-------|------|-------|------|
| alpha-BHC               | 319-84-6  | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| Hexachlorobenzene (HCB) | 118-74-1  | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| beta-BHC                | 319-85-7  | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| gamma-BHC               | 58-89-9   | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| delta-BHC               | 319-86-8  | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| Heptachlor              | 76-44-8   | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| Aldrin                  | 309-00-2  | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| Heptachlor epoxide      | 1024-57-3 | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| cis-Chlordane           | 5103-71-9 | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| trans-Chlordane         | 5103-74-2 | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| Endosulfan 1            | 959-98-8  | 0.03 | mg/kg | ---- | <0.03 | ---- | <0.03 | ---- |
| 4,4'-DDE                | 72-55-9   | 0.05 | mg/kg | ---- | <0.05 | ---- | <0.05 | ---- |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                        |                      |      |       | CS01              | CS02              | CS03              | CS04              | CS05              |
|------------------------------------------------------------------------|----------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                      |      |       | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |
| Compound                                                               | CAS Number           | LOR  | Unit  | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |
|                                                                        |                      |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP075I: Organochlorine Pesticides - Continued</b>                   |                      |      |       |                   |                   |                   |                   |                   |
| Dieldrin                                                               | 60-57-1              | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| Endrin aldehyde                                                        | 7421-93-4            | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| Endrin                                                                 | 72-20-8              | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| Endosulfan 2                                                           | 33213-65-9           | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| 4,4'-DDD                                                               | 72-54-8              | 0.05 | mg/kg | ----              | <0.05             | ----              | <0.05             | ----              |
| Endosulfan sulfate                                                     | 1031-07-8            | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| 4,4'-DDT                                                               | 50-29-3              | 0.05 | mg/kg | ----              | <0.05             | ----              | <0.05             | ----              |
| Methoxychlor                                                           | 72-43-5              | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| ^ Sum of organochlorine pesticides                                     | ----                 | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| ^ Sum of Aldrin + Dieldrin                                             | 309-00-2/60-57-1     | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| ^ Sum of DDD + DDE + DDT                                               | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | ----              | <0.05             | ----              | <0.05             | ----              |
| ^ Chlordane                                                            | 57-74-9              | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| ^ Sum of other organochlorine pesticides                               | ----                 | 0.03 | mg/kg | ----              | <0.03             | ----              | <0.03             | ----              |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                      |      |       |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg | <10               | ----              | <10               | ----              | <10               |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg | ----              | <10               | ----              | <10               | ----              |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg | <50               | ----              | <50               | ----              | <50               |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg | ----              | <50               | ----              | <50               | ----              |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg | ----              | <10               | ----              | <10               | ----              |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg | <100              | ----              | <100              | ----              | <100              |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg | ----              | <100              | ----              | 100               | ----              |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg | <100              | ----              | <100              | ----              | <100              |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg | ----              | <100              | ----              | 180               | ----              |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg | <50               | ----              | <50               | ----              | <50               |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg | ----              | <50               | ----              | 280               | ----              |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                      |      |       |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg | <10               | ----              | <10               | ----              | <10               |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX          | 10   | mg/kg | <10               | ----              | <10               | ----              | <10               |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg | <50               | ----              | <50               | ----              | <50               |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg | ----              | <50               | ----              | <50               | ----              |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg | 110               | ----              | <100              | ----              | <100              |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg | ----              | 120               | ----              | 240               | ----              |
| >C34 - C40 Fraction                                                    | ----                 | 100  | mg/kg | <100              | ----              | <100              | ----              | <100              |



| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                          |                   |      |       | Client sample ID  | CS01              | CS02              | CS03              | CS04              | CS05 |
|-----------------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| Client sampling date / time                                                 |                   |      |       | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |      |
| Compound                                                                    | CAS Number        | LOR  | Unit  | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |      |
|                                                                             |                   |      |       | Result            | Result            | Result            | Result            | Result            |      |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued |                   |      |       |                   |                   |                   |                   |                   |      |
| >C34 - C40 Fraction                                                         | ----              | 100  | mg/kg | ----              | <100              | ----              | <100              | ----              |      |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | 110               | ----              | <50               | ----              | <50               |      |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | ----              | 120               | ----              | 240               | ----              |      |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                                | ----              | 50   | mg/kg | <50               | ----              | <50               | ----              | <50               |      |
| >C10 - C16 Fraction minus Naphthalene (F2)                                  | ----              | 50   | mg/kg | ----              | <50               | ----              | <50               | ----              |      |
| C6 - C10 Fraction minus BTEX (F1)                                           | C6_C10-BTEX       | 10   | mg/kg | ----              | <10               | ----              | <10               | ----              |      |
| EP080: BTEXN                                                                |                   |      |       |                   |                   |                   |                   |                   |      |
| Benzene                                                                     | 71-43-2           | 0.2  | mg/kg | <0.2              | ----              | <0.2              | ----              | <0.2              |      |
| Toluene                                                                     | 108-88-3          | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |      |
| Ethylbenzene                                                                | 100-41-4          | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |      |
| meta- & para-Xylene                                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |      |
| ortho-Xylene                                                                | 95-47-6           | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |      |
| ^ Sum of BTEX                                                               | ----              | 0.2  | mg/kg | <0.2              | ----              | <0.2              | ----              | <0.2              |      |
| ^ Total Xylenes                                                             | ----              | 0.5  | mg/kg | <0.5              | ----              | <0.5              | ----              | <0.5              |      |
| Naphthalene                                                                 | 91-20-3           | 1    | mg/kg | <1                | ----              | <1                | ----              | <1                |      |
| EP066S: PCB Surrogate                                                       |                   |      |       |                   |                   |                   |                   |                   |      |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | ----              | 111               | ----              | 93.4              | ----              |      |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | 89.4              | ----              | 95.2              | ----              | 105               |      |
| EP068S: Organochlorine Pesticide Surrogate                                  |                   |      |       |                   |                   |                   |                   |                   |      |
| Dibromo-DDE                                                                 | 21655-73-2        | 0.05 | %     | 94.5              | ----              | 91.0              | ----              | 85.5              |      |
| EP068T: Organophosphorus Pesticide Surrogate                                |                   |      |       |                   |                   |                   |                   |                   |      |
| DEF                                                                         | 78-48-8           | 0.05 | %     | 100               | ----              | 90.8              | ----              | 80.3              |      |
| EP074S: VOC Surrogates (Ultra-Trace)                                        |                   |      |       |                   |                   |                   |                   |                   |      |
| 1,2-Dichloroethane-D4                                                       | 17060-07-0        | 0.1  | %     | ----              | 72.2              | ----              | 73.2              | ----              |      |
| Toluene-D8                                                                  | 2037-26-5         | 0.1  | %     | ----              | 68.0              | ----              | 71.3              | ----              |      |
| 4-Bromofluorobenzene                                                        | 460-00-4          | 0.1  | %     | ----              | 76.2              | ----              | 66.2              | ----              |      |
| EP075(SIM)S: Phenolic Compound Surrogates                                   |                   |      |       |                   |                   |                   |                   |                   |      |
| Phenol-d6                                                                   | 13127-88-3        | 0.5  | %     | 100               | ----              | 106               | ----              | 108               |      |
| 2-Chlorophenol-D4                                                           | 93951-73-6        | 0.5  | %     | 94.2              | ----              | 102               | ----              | 105               |      |
| 2,4,6-Tribromophenol                                                        | 118-79-6          | 0.5  | %     | 81.8              | ----              | 61.0              | ----              | 52.4              |      |
| EP075(SIM)T: PAH Surrogates                                                 |                   |      |       |                   |                   |                   |                   |                   |      |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                        |            |       |      | Client sample ID | CS01              | CS02              | CS03              | CS04              | CS05              |
|---------------------------------------------------------------------------|------------|-------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                               |            |       |      |                  | 22-Jan-2019 11:00 | 22-Jan-2019 11:10 | 22-Jan-2019 11:20 | 22-Jan-2019 11:30 | 22-Jan-2019 11:40 |
| Compound                                                                  | CAS Number | LOR   | Unit |                  | EM1900929-028     | EM1900929-029     | EM1900929-030     | EM1900929-031     | EM1900929-032     |
|                                                                           |            |       |      |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)T: PAH Surrogates - Continued</b>                            |            |       |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.5   | %    |                  | 100               | ----              | 112               | ----              | 113               |
| Anthracene-d10                                                            | 1719-06-8  | 0.5   | %    |                  | 87.8              | ----              | 109               | ----              | 112               |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.5   | %    |                  | 92.1              | ----              | 111               | ----              | 113               |
| <b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>         |            |       |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                                                 | 13127-88-3 | 0.025 | %    |                  | ----              | 93.5              | ----              | 97.0              | ----              |
| 2-Chlorophenol-D4                                                         | 93951-73-6 | 0.025 | %    |                  | ----              | 78.3              | ----              | 76.3              | ----              |
| 2,4,6-Tribromophenol                                                      | 118-79-6   | 0.025 | %    |                  | ----              | 95.3              | ----              | 93.4              | ----              |
| <b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b> |            |       |      |                  |                   |                   |                   |                   |                   |
| Nitrobenzene-D5                                                           | 4165-60-0  | 0.025 | %    |                  | ----              | 97.2              | ----              | 102               | ----              |
| 1,2-Dichlorobenzene-D4                                                    | 2199-69-1  | 0.025 | %    |                  | ----              | 76.1              | ----              | 80.8              | ----              |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.025 | %    |                  | ----              | 97.3              | ----              | 93.6              | ----              |
| Anthracene-d10                                                            | 1719-06-8  | 0.025 | %    |                  | ----              | 94.1              | ----              | 89.9              | ----              |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.025 | %    |                  | ----              | 99.5              | ----              | 99.5              | ----              |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>                                     |            |       |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                                                     | 17060-07-0 | 0.2   | %    |                  | 54.7              | ----              | 68.9              | ----              | 67.6              |
| Toluene-D8                                                                | 2037-26-5  | 0.2   | %    |                  | 55.7              | ----              | 70.6              | ----              | 66.6              |
| 4-Bromofluorobenzene                                                      | 460-00-4   | 0.2   | %    |                  | 90.8              | ----              | 102               | ----              | 102               |

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                        |            |            |      | Client sample ID  |  | CS06              | CS07 | CS08              | FD01 | FD02              |  |                   |  |      |  |
|-----------------------------------------------------------|------------|------------|------|-------------------|--|-------------------|------|-------------------|------|-------------------|--|-------------------|--|------|--|
| Client sampling date / time                               |            |            |      | 22-Jan-2019 11:50 |  | 22-Jan-2019 12:30 |      | 22-Jan-2019 12:40 |      | 22-Jan-2019 09:00 |  | 22-Jan-2019 10:30 |  |      |  |
| Compound                                                  | CAS Number | LOR        | Unit | EM1900929-033     |  | EM1900929-034     |      | EM1900929-035     |      | EM1900929-036     |  | EM1900929-037     |  |      |  |
|                                                           |            |            |      | Result            |  | Result            |      | Result            |      | Result            |  | Result            |  |      |  |
| EA001: pH in soil using 0.01M CaCl extract                |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| pH (CaCl2)                                                |            | ----       | 0.1  | pH Unit           |  | ----              |      | 4.1               |      | ----              |  | 5.4               |  |      |  |
| EA055: Moisture Content (Dried @ 105-110°C)               |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Moisture Content                                          |            | ----       | 1.0  | %                 |  | 14.5              |      | 8.4               |      | 10.7              |  | 10.0              |  | 15.3 |  |
| EA200: AS 4964 - 2004 Identification of Asbestos in Soils |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Asbestos Detected                                         |            | 1332-21-4  | 0.1  | g/kg              |  | No                |      | No                |      | No                |  | ----              |  | ---- |  |
| Asbestos (Trace)                                          |            | 1332-21-4  | 5    | Fibres            |  | No                |      | No                |      | No                |  | ----              |  | ---- |  |
| Asbestos Type                                             |            | 1332-21-4  | -    | --                |  | -                 |      | -                 |      | -                 |  | ----              |  | ---- |  |
| Sample weight (dry)                                       |            | ----       | 0.01 | g                 |  | 9.50              |      | 22.6              |      | 51.0              |  | ----              |  | ---- |  |
| APPROVED IDENTIFIER:                                      |            | ----       | -    | --                |  | V.PHUNG           |      | V.PHUNG           |      | V.PHUNG           |  | ----              |  | ---- |  |
| Synthetic Mineral Fibre                                   |            | ----       | 0.1  | g/kg              |  | No                |      | No                |      | No                |  | ----              |  | ---- |  |
| Organic Fibre                                             |            | ----       | 0.1  | g/kg              |  | Yes               |      | Yes               |      | Yes               |  | ----              |  | ---- |  |
| EG005T: Total Metals by ICP-AES                           |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Arsenic                                                   |            | 7440-38-2  | 5    | mg/kg             |  | ----              |      | <5                |      | ----              |  | ----              |  | <5   |  |
| Cadmium                                                   |            | 7440-43-9  | 1    | mg/kg             |  | ----              |      | <1                |      | ----              |  | ----              |  | <1   |  |
| Copper                                                    |            | 7440-50-8  | 5    | mg/kg             |  | ----              |      | 6                 |      | ----              |  | ----              |  | 5    |  |
| Lead                                                      |            | 7439-92-1  | 5    | mg/kg             |  | ----              |      | 11                |      | ----              |  | ----              |  | 9    |  |
| Molybdenum                                                |            | 7439-98-7  | 2    | mg/kg             |  | ----              |      | <2                |      | ----              |  | ----              |  | <2   |  |
| Nickel                                                    |            | 7440-02-0  | 2    | mg/kg             |  | ----              |      | 3                 |      | ----              |  | ----              |  | 2    |  |
| Selenium                                                  |            | 7782-49-2  | 5    | mg/kg             |  | ----              |      | <5                |      | ----              |  | ----              |  | <5   |  |
| Silver                                                    |            | 7440-22-4  | 2    | mg/kg             |  | ----              |      | <2                |      | ----              |  | ----              |  | <2   |  |
| Tin                                                       |            | 7440-31-5  | 5    | mg/kg             |  | ----              |      | <5                |      | ----              |  | ----              |  | <5   |  |
| Zinc                                                      |            | 7440-66-6  | 5    | mg/kg             |  | ----              |      | 11                |      | ----              |  | ----              |  | 22   |  |
| EG035T: Total Recoverable Mercury by FIMS                 |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Mercury                                                   |            | 7439-97-6  | 0.1  | mg/kg             |  | ----              |      | <0.1              |      | ----              |  | ----              |  | <0.1 |  |
| EG048: Hexavalent Chromium (Alkaline Digest)              |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Hexavalent Chromium                                       |            | 18540-29-9 | 0.5  | mg/kg             |  | ----              |      | <0.5              |      | ----              |  | ----              |  | <0.5 |  |
| EK026SF: Total CN by Segmented Flow Analyser              |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Total Cyanide                                             |            | 57-12-5    | 1    | mg/kg             |  | ----              |      | <1                |      | ----              |  | ----              |  | <1   |  |
| EK040T: Fluoride Total                                    |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Fluoride                                                  |            | 16984-48-8 | 40   | mg/kg             |  | ----              |      | 200               |      | ----              |  | ----              |  | 260  |  |
| EP066: Polychlorinated Biphenyls (PCB)                    |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |
| Total Polychlorinated biphenyls                           |            | ----       | 0.1  | mg/kg             |  | ----              |      | <0.1              |      | ----              |  | ----              |  | <0.1 |  |
| Total Polychlorinated biphenyls                           |            | ----       | 0.1  | mg/kg             |  | <0.1              |      | ----              |      | <0.1              |  | <0.1              |  | ---- |  |
| EP068A: Organochlorine Pesticides (OC)                    |            |            |      |                   |  |                   |      |                   |      |                   |  |                   |  |      |  |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                           |                      |      |       | CS06              | CS07              | CS08              | FD01              | FD02              |
|-----------------------------------------------------------|----------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |                      |      |       | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |
| Compound                                                  | CAS Number           | LOR  | Unit  | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |
|                                                           |                      |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP068A: Organochlorine Pesticides (OC) - Continued</b> |                      |      |       |                   |                   |                   |                   |                   |
| alpha-BHC                                                 | 319-84-6             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Hexachlorobenzene (HCB)                                   | 118-74-1             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| beta-BHC                                                  | 319-85-7             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| gamma-BHC                                                 | 58-89-9              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| delta-BHC                                                 | 319-86-8             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Heptachlor                                                | 76-44-8              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Aldrin                                                    | 309-00-2             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Heptachlor epoxide                                        | 1024-57-3            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| ^ Total Chlordane (sum)                                   | ----                 | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| trans-Chlordane                                           | 5103-74-2            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| alpha-Endosulfan                                          | 959-98-8             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| cis-Chlordane                                             | 5103-71-9            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Dieldrin                                                  | 60-57-1              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| 4,4'-DDE                                                  | 72-55-9              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Endrin                                                    | 72-20-8              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| beta-Endosulfan                                           | 33213-65-9           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| ^ Endosulfan (sum)                                        | 115-29-7             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| 4,4'-DDD                                                  | 72-54-8              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Endrin aldehyde                                           | 7421-93-4            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Endosulfan sulfate                                        | 1031-07-8            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| 4,4'-DDT                                                  | 50-29-3              | 0.2  | mg/kg | <0.2              | ----              | <0.2              | <0.2              | ----              |
| Endrin ketone                                             | 53494-70-5           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Methoxychlor                                              | 72-43-5              | 0.2  | mg/kg | <0.2              | ----              | <0.2              | <0.2              | ----              |
| ^ Sum of Aldrin + Dieldrin                                | 309-00-2/60-57-1     | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| ^ Sum of DDD + DDE + DDT                                  | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| <b>EP068B: Organophosphorus Pesticides (OP)</b>           |                      |      |       |                   |                   |                   |                   |                   |
| Dichlorvos                                                | 62-73-7              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Demeton-S-methyl                                          | 919-86-8             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Monocrotophos                                             | 6923-22-4            | 0.2  | mg/kg | <0.2              | ----              | <0.2              | <0.2              | ----              |
| Dimethoate                                                | 60-51-5              | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Diazinon                                                  | 333-41-5             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Chlorpyrifos-methyl                                       | 5598-13-0            | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Parathion-methyl                                          | 298-00-0             | 0.2  | mg/kg | <0.2              | ----              | <0.2              | <0.2              | ----              |
| Malathion                                                 | 121-75-5             | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                             |                   |      |       | CS06              | CS07              | CS08              | FD01              | FD02              |
|-------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                 |                   |      |       | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |
| Compound                                                    | CAS Number        | LOR  | Unit  | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |
|                                                             |                   |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP068B: Organophosphorus Pesticides (OP) - Continued</b> |                   |      |       |                   |                   |                   |                   |                   |
| Fenthion                                                    | 55-38-9           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Chlorpyrifos                                                | 2921-88-2         | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Parathion                                                   | 56-38-2           | 0.2  | mg/kg | <0.2              | ----              | <0.2              | <0.2              | ----              |
| Pirimphos-ethyl                                             | 23505-41-1        | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Chlorfenvinphos                                             | 470-90-6          | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Bromophos-ethyl                                             | 4824-78-6         | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Fenamiphos                                                  | 22224-92-6        | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Prothiofos                                                  | 34643-46-4        | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Ethion                                                      | 563-12-2          | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Carbophenothion                                             | 786-19-6          | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| Azinphos Methyl                                             | 86-50-0           | 0.05 | mg/kg | <0.05             | ----              | <0.05             | <0.05             | ----              |
| <b>EP074A: Monocyclic Aromatic Hydrocarbons</b>             |                   |      |       |                   |                   |                   |                   |                   |
| Benzene                                                     | 71-43-2           | 0.2  | mg/kg | ----              | <0.2              | ----              | ----              | <0.2              |
| Toluene                                                     | 108-88-3          | 0.5  | mg/kg | ----              | <0.5              | ----              | ----              | <0.5              |
| Ethylbenzene                                                | 100-41-4          | 0.5  | mg/kg | ----              | <0.5              | ----              | ----              | <0.5              |
| meta- & para-Xylene                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | ----              | <0.5              | ----              | ----              | <0.5              |
| Styrene                                                     | 100-42-5          | 0.5  | mg/kg | ----              | <0.5              | ----              | ----              | <0.5              |
| ortho-Xylene                                                | 95-47-6           | 0.5  | mg/kg | ----              | <0.5              | ----              | ----              | <0.5              |
| ^ Sum of monocyclic aromatic hydrocarbons                   | ----              | 0.2  | mg/kg | ----              | <0.2              | ----              | ----              | <0.2              |
| ^ Total Xylenes                                             | ----              | 0.5  | mg/kg | ----              | <0.5              | ----              | ----              | <0.5              |
| <b>EP074H: Naphthalene</b>                                  |                   |      |       |                   |                   |                   |                   |                   |
| Naphthalene                                                 | 91-20-3           | 1    | mg/kg | ----              | <1                | ----              | ----              | <1                |
| <b>EP074I: Volatile Halogenated Compounds</b>               |                   |      |       |                   |                   |                   |                   |                   |
| Vinyl chloride                                              | 75-01-4           | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| 1,1-Dichloroethene                                          | 75-35-4           | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| Methylene chloride                                          | 75-09-2           | 0.4  | mg/kg | ----              | <0.4              | ----              | ----              | <0.4              |
| trans-1,2-Dichloroethene                                    | 156-60-5          | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| cis-1,2-Dichloroethene                                      | 156-59-2          | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| Chloroform                                                  | 67-66-3           | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| 1,1,1-Trichloroethane                                       | 71-55-6           | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| Carbon Tetrachloride                                        | 56-23-5           | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| 1,2-Dichloroethane                                          | 107-06-2          | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| Trichloroethene                                             | 79-01-6           | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                           |            |      |       | CS06              | CS07              | CS08              | FD01              | FD02              |
|-----------------------------------------------------------|------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                               |            |      |       | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |
| Compound                                                  | CAS Number | LOR  | Unit  | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |
|                                                           |            |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP074I: Volatile Halogenated Compounds - Continued</b> |            |      |       |                   |                   |                   |                   |                   |
| 1.1.2-Trichloroethane                                     | 79-00-5    | 0.04 | mg/kg | ----              | <0.04             | ----              | ----              | <0.04             |
| Tetrachloroethene                                         | 127-18-4   | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| 1.1.1.2-Tetrachloroethane                                 | 630-20-6   | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| 1.1.2.2-Tetrachloroethane                                 | 79-34-5    | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| Hexachlorobutadiene                                       | 87-68-3    | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| Chlorobenzene                                             | 108-90-7   | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| 1.4-Dichlorobenzene                                       | 106-46-7   | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| 1.2-Dichlorobenzene                                       | 95-50-1    | 0.02 | mg/kg | ----              | <0.02             | ----              | ----              | <0.02             |
| 1.2.4-Trichlorobenzene                                    | 120-82-1   | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| ^ Sum of volatile chlorinated hydrocarbons                | ----       | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| ^ Sum of other chlorinated hydrocarbons                   | ----       | 0.01 | mg/kg | ----              | <0.01             | ----              | ----              | <0.01             |
| <b>EP075(SIM)A: Phenolic Compounds</b>                    |            |      |       |                   |                   |                   |                   |                   |
| Phenol                                                    | 108-95-2   | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 2-Chlorophenol                                            | 95-57-8    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 2-Methylphenol                                            | 95-48-7    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 3- & 4-Methylphenol                                       | 1319-77-3  | 1    | mg/kg | <1                | ----              | <1                | <1                | ----              |
| 2-Nitrophenol                                             | 88-75-5    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 2.4-Dimethylphenol                                        | 105-67-9   | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 2.4-Dichlorophenol                                        | 120-83-2   | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 2.6-Dichlorophenol                                        | 87-65-0    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 4-Chloro-3-methylphenol                                   | 59-50-7    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 2.4.6-Trichlorophenol                                     | 88-06-2    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| 2.4.5-Trichlorophenol                                     | 95-95-4    | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |
| Pentachlorophenol                                         | 87-86-5    | 2    | mg/kg | <2                | ----              | <2                | <2                | ----              |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>     |            |      |       |                   |                   |                   |                   |                   |
| 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              | ----              |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                   |                   |      |       | CS06              | CS07              | CS08              | FD01              | FD02              |
|-------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                       |                   |      |       | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |
| Compound                                                          | CAS Number        | LOR  | Unit  | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |
|                                                                   |                   |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b> |                   |      |       |                   |                   |                   |                   |                   |
| 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               | ----              |
| <b>EP075A: Phenolic Compounds (Halogenated)</b>                   |                   |      |       |                   |                   |                   |                   |                   |
| 2-Chlorophenol                                                    | 95-57-8           | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| 2,4-Dichlorophenol                                                | 120-83-2          | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| 2,6-Dichlorophenol                                                | 87-65-0           | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| 4-Chloro-3-methylphenol                                           | 59-50-7           | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| 2,4,5-Trichlorophenol                                             | 95-95-4           | 0.05 | mg/kg | ----              | <0.05             | ----              | ----              | <0.05             |
| 2,4,6-Trichlorophenol                                             | 88-06-2           | 0.05 | mg/kg | ----              | <0.05             | ----              | ----              | <0.05             |
| 2,3,5,6-Tetrachlorophenol                                         | 935-95-5          | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| 2,3,4,5 & 2,3,4,6-Tetrachlorophenol                               | 4901-51-3/58-90-2 | 0.05 | mg/kg | ----              | <0.05             | ----              | ----              | <0.05             |
| Pentachlorophenol                                                 | 87-86-5           | 0.2  | mg/kg | ----              | <0.2              | ----              | ----              | <0.2              |
| ^ Sum of Phenols (halogenated)                                    | ----              | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| <b>EP075A: Phenolic Compounds (Non-halogenated)</b>               |                   |      |       |                   |                   |                   |                   |                   |
| Phenol                                                            | 108-95-2          | 1    | mg/kg | ----              | <1                | ----              | ----              | <1                |
| 2-Methylphenol                                                    | 95-48-7           | 1    | mg/kg | ----              | <1                | ----              | ----              | <1                |
| 3- & 4-Methylphenol                                               | 1319-77-3         | 1    | mg/kg | ----              | <1                | ----              | ----              | <1                |
| 2-Nitrophenol                                                     | 88-75-5           | 1    | mg/kg | ----              | <1                | ----              | ----              | <1                |
| 2,4-Dimethylphenol                                                | 105-67-9          | 1    | mg/kg | ----              | <1                | ----              | ----              | <1                |
| 2,4-Dinitrophenol                                                 | 51-28-5           | 5    | mg/kg | ----              | <5                | ----              | ----              | <5                |
| 4-Nitrophenol                                                     | 100-02-7          | 5    | mg/kg | ----              | <5                | ----              | ----              | <5                |
| 2-Methyl-4,6-dinitrophenol                                        | 8071-51-0         | 5    | mg/kg | ----              | <5                | ----              | ----              | <5                |
| Dinoseb                                                           | 88-85-7           | 5    | mg/kg | ----              | <5                | ----              | ----              | <5                |
| 2-Cyclohexyl-4,6-Dinitrophenol                                    | 131-89-5          | 5    | mg/kg | ----              | <5                | ----              | ----              | <5                |
| ^ Sum of Phenols (non-halogenated)                                | ----              | 1    | mg/kg | ----              | <1                | ----              | ----              | <1                |



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                             |            |     |      | CS06              | CS07              | CS08              | FD01              | FD02              |
|-----------------------------|------------|-----|------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time |            |     |      | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |
| Compound                    | CAS Number | LOR | Unit | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |
|                             |            |     |      | Result            | Result            | Result            | Result            | Result            |

### EP075A: Phenolic Compounds (Non-halogenated) - Continued

### EP075B: Polynuclear Aromatic Hydrocarbons

|                                           |                   |     |       |      |      |      |      |      |
|-------------------------------------------|-------------------|-----|-------|------|------|------|------|------|
| Naphthalene                               | 91-20-3           | 0.5 | mg/kg | ---- | <0.5 | ---- | ---- | <0.5 |
| Acenaphthene                              | 83-32-9           | 0.5 | mg/kg | ---- | <0.5 | ---- | ---- | <0.5 |
| Acenaphthylene                            | 208-96-8          | 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) & Benzo(k)fluoranthene         | 205-99-2 207-08-9 | 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  |

### EP075I: Organochlorine Pesticides

|                         |           |      |       |      |       |      |      |       |
|-------------------------|-----------|------|-------|------|-------|------|------|-------|
| alpha-BHC               | 319-84-6  | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| Hexachlorobenzene (HCB) | 118-74-1  | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| beta-BHC                | 319-85-7  | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| gamma-BHC               | 58-89-9   | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| delta-BHC               | 319-86-8  | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| Heptachlor              | 76-44-8   | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| Aldrin                  | 309-00-2  | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| Heptachlor epoxide      | 1024-57-3 | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| cis-Chlordane           | 5103-71-9 | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| trans-Chlordane         | 5103-74-2 | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| Endosulfan 1            | 959-98-8  | 0.03 | mg/kg | ---- | <0.03 | ---- | ---- | <0.03 |
| 4,4'-DDE                | 72-55-9   | 0.05 | mg/kg | ---- | <0.05 | ---- | ---- | <0.05 |





## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|                                                                        |                      |      |       | CS06              | CS07              | CS08              | FD01              | FD02              |
|------------------------------------------------------------------------|----------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                            |                      |      |       | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |
| Compound                                                               | CAS Number           | LOR  | Unit  | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |
|                                                                        |                      |      |       | Result            | Result            | Result            | Result            | Result            |
| <b>EP075I: Organochlorine Pesticides - Continued</b>                   |                      |      |       |                   |                   |                   |                   |                   |
| Dieldrin                                                               | 60-57-1              | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| Endrin aldehyde                                                        | 7421-93-4            | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| Endrin                                                                 | 72-20-8              | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| Endosulfan 2                                                           | 33213-65-9           | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| 4,4`-DDD                                                               | 72-54-8              | 0.05 | mg/kg | ----              | <0.05             | ----              | ----              | <0.05             |
| Endosulfan sulfate                                                     | 1031-07-8            | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| 4,4`-DDT                                                               | 50-29-3              | 0.05 | mg/kg | ----              | <0.05             | ----              | ----              | <0.05             |
| Methoxychlor                                                           | 72-43-5              | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| ^ Sum of organochlorine pesticides                                     | ----                 | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| ^ Sum of Aldrin + Dieldrin                                             | 309-00-2/60-57-1     | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| ^ Sum of DDD + DDE + DDT                                               | 72-54-8/72-55-9/50-2 | 0.05 | mg/kg | ----              | <0.05             | ----              | ----              | <0.05             |
| ^ Chlordane                                                            | 57-74-9              | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| ^ Sum of other organochlorine pesticides                               | ----                 | 0.03 | mg/kg | ----              | <0.03             | ----              | ----              | <0.03             |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                      |      |       |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg | <10               | ----              | <10               | <10               | ----              |
| C6 - C9 Fraction                                                       | ----                 | 10   | mg/kg | ----              | <10               | ----              | ----              | <10               |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg | <50               | ----              | <50               | <50               | ----              |
| C10 - C14 Fraction                                                     | ----                 | 50   | mg/kg | ----              | <50               | ----              | ----              | <50               |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg | ----              | <10               | ----              | ----              | <10               |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg | <100              | ----              | <100              | <100              | ----              |
| C15 - C28 Fraction                                                     | ----                 | 100  | mg/kg | ----              | <100              | ----              | ----              | <100              |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg | <100              | ----              | <100              | <100              | ----              |
| C29 - C36 Fraction                                                     | ----                 | 100  | mg/kg | ----              | 110               | ----              | ----              | 120               |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg | <50               | ----              | <50               | <50               | ----              |
| ^ C10 - C36 Fraction (sum)                                             | ----                 | 50   | mg/kg | ----              | 110               | ----              | ----              | 120               |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                      |      |       |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                      | C6_C10               | 10   | mg/kg | <10               | ----              | <10               | <10               | ----              |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX          | 10   | mg/kg | <10               | ----              | <10               | <10               | ----              |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg | <50               | ----              | <50               | <50               | ----              |
| >C10 - C16 Fraction                                                    | ----                 | 50   | mg/kg | ----              | <50               | ----              | ----              | <50               |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg | <100              | ----              | <100              | <100              | ----              |
| >C16 - C34 Fraction                                                    | ----                 | 100  | mg/kg | ----              | 130               | ----              | ----              | 160               |
| >C34 - C40 Fraction                                                    | ----                 | 100  | mg/kg | <100              | ----              | <100              | <100              | ----              |

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                          |                   |      |       | Client sample ID  | CS06              | CS07              | CS08              | FD01              | FD02 |
|-----------------------------------------------------------------------------|-------------------|------|-------|-------------------|-------------------|-------------------|-------------------|-------------------|------|
| Client sampling date / time                                                 |                   |      |       | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |      |
| Compound                                                                    | CAS Number        | LOR  | Unit  | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |      |
|                                                                             |                   |      |       | Result            | Result            | Result            | Result            | Result            |      |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued |                   |      |       |                   |                   |                   |                   |                   |      |
| >C34 - C40 Fraction                                                         | ----              | 100  | mg/kg | ----              | <100              | ----              | ----              | <100              |      |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | <50               | ----              | <50               | <50               | ----              |      |
| ^ >C10 - C40 Fraction (sum)                                                 | ----              | 50   | mg/kg | ----              | 130               | ----              | ----              | 160               |      |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                                | ----              | 50   | mg/kg | <50               | ----              | <50               | <50               | ----              |      |
| >C10 - C16 Fraction minus Naphthalene (F2)                                  | ----              | 50   | mg/kg | ----              | <50               | ----              | ----              | <50               |      |
| C6 - C10 Fraction minus BTEX (F1)                                           | C6_C10-BTEX       | 10   | mg/kg | ----              | <10               | ----              | ----              | <10               |      |
| EP080: BTEXN                                                                |                   |      |       |                   |                   |                   |                   |                   |      |
| Benzene                                                                     | 71-43-2           | 0.2  | mg/kg | <0.2              | ----              | <0.2              | <0.2              | ----              |      |
| Toluene                                                                     | 108-88-3          | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |      |
| Ethylbenzene                                                                | 100-41-4          | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |      |
| meta- & para-Xylene                                                         | 108-38-3 106-42-3 | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |      |
| ortho-Xylene                                                                | 95-47-6           | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |      |
| ^ Sum of BTEX                                                               | ----              | 0.2  | mg/kg | <0.2              | ----              | <0.2              | <0.2              | ----              |      |
| ^ Total Xylenes                                                             | ----              | 0.5  | mg/kg | <0.5              | ----              | <0.5              | <0.5              | ----              |      |
| Naphthalene                                                                 | 91-20-3           | 1    | mg/kg | <1                | ----              | <1                | <1                | ----              |      |
| EP066S: PCB Surrogate                                                       |                   |      |       |                   |                   |                   |                   |                   |      |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | ----              | 96.6              | ----              | ----              | 106               |      |
| Decachlorobiphenyl                                                          | 2051-24-3         | 0.1  | %     | 105               | ----              | 113               | 104               | ----              |      |
| EP068S: Organochlorine Pesticide Surrogate                                  |                   |      |       |                   |                   |                   |                   |                   |      |
| Dibromo-DDE                                                                 | 21655-73-2        | 0.05 | %     | 101               | ----              | 85.2              | 90.6              | ----              |      |
| EP068T: Organophosphorus Pesticide Surrogate                                |                   |      |       |                   |                   |                   |                   |                   |      |
| DEF                                                                         | 78-48-8           | 0.05 | %     | 96.1              | ----              | 72.1              | 82.8              | ----              |      |
| EP074S: VOC Surrogates (Ultra-Trace)                                        |                   |      |       |                   |                   |                   |                   |                   |      |
| 1,2-Dichloroethane-D4                                                       | 17060-07-0        | 0.1  | %     | ----              | 69.6              | ----              | ----              | 62.3              |      |
| Toluene-D8                                                                  | 2037-26-5         | 0.1  | %     | ----              | 81.8              | ----              | ----              | 76.1              |      |
| 4-Bromofluorobenzene                                                        | 460-00-4          | 0.1  | %     | ----              | 72.5              | ----              | ----              | 65.6              |      |
| EP075(SIM)S: Phenolic Compound Surrogates                                   |                   |      |       |                   |                   |                   |                   |                   |      |
| Phenol-d6                                                                   | 13127-88-3        | 0.5  | %     | 101               | ----              | 101               | 99.4              | ----              |      |
| 2-Chlorophenol-D4                                                           | 93951-73-6        | 0.5  | %     | 96.0              | ----              | 98.0              | 96.5              | ----              |      |
| 2,4,6-Tribromophenol                                                        | 118-79-6          | 0.5  | %     | 55.4              | ----              | 74.1              | 78.0              | ----              |      |
| EP075(SIM)T: PAH Surrogates                                                 |                   |      |       |                   |                   |                   |                   |                   |      |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                        |            |       |      | Client sample ID | CS06              | CS07              | CS08              | FD01              | FD02              |
|---------------------------------------------------------------------------|------------|-------|------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                               |            |       |      |                  | 22-Jan-2019 11:50 | 22-Jan-2019 12:30 | 22-Jan-2019 12:40 | 22-Jan-2019 09:00 | 22-Jan-2019 10:30 |
| Compound                                                                  | CAS Number | LOR   | Unit |                  | EM1900929-033     | EM1900929-034     | EM1900929-035     | EM1900929-036     | EM1900929-037     |
|                                                                           |            |       |      |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP075(SIM)T: PAH Surrogates - Continued</b>                            |            |       |      |                  |                   |                   |                   |                   |                   |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.5   | %    |                  | 103               | ----              | 104               | 104               | ----              |
| Anthracene-d10                                                            | 1719-06-8  | 0.5   | %    |                  | 79.7              | ----              | 106               | 107               | ----              |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.5   | %    |                  | 101               | ----              | 107               | 107               | ----              |
| <b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>         |            |       |      |                  |                   |                   |                   |                   |                   |
| Phenol-d6                                                                 | 13127-88-3 | 0.025 | %    |                  | ----              | 103               | ----              | ----              | 108               |
| 2-Chlorophenol-D4                                                         | 93951-73-6 | 0.025 | %    |                  | ----              | 83.8              | ----              | ----              | 89.0              |
| 2,4,6-Tribromophenol                                                      | 118-79-6   | 0.025 | %    |                  | ----              | 101               | ----              | ----              | 121               |
| <b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b> |            |       |      |                  |                   |                   |                   |                   |                   |
| Nitrobenzene-D5                                                           | 4165-60-0  | 0.025 | %    |                  | ----              | 116               | ----              | ----              | 101               |
| 1,2-Dichlorobenzene-D4                                                    | 2199-69-1  | 0.025 | %    |                  | ----              | 89.2              | ----              | ----              | 97.5              |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 0.025 | %    |                  | ----              | 106               | ----              | ----              | 114               |
| Anthracene-d10                                                            | 1719-06-8  | 0.025 | %    |                  | ----              | 101               | ----              | ----              | 109               |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 0.025 | %    |                  | ----              | 111               | ----              | ----              | 106               |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>                                     |            |       |      |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                                                     | 17060-07-0 | 0.2   | %    |                  | 65.3              | ----              | 77.4              | 72.7              | ----              |
| Toluene-D8                                                                | 2037-26-5  | 0.2   | %    |                  | 68.1              | ----              | 78.6              | 75.1              | ----              |
| 4-Bromofluorobenzene                                                      | 460-00-4   | 0.2   | %    |                  | 102               | ----              | 112               | 109               | ----              |



## Analytical Results

|                                                     |                   |     |         |                  |                      |       |       |       |       |
|-----------------------------------------------------|-------------------|-----|---------|------------------|----------------------|-------|-------|-------|-------|
| Sub-Matrix: <b>SOIL</b><br>(Matrix: <b>SOIL</b> )   |                   |     |         | Client sample ID | <b>FD03</b>          | ----  | ----  | ----  | ----  |
| Client sampling date / time                         |                   |     |         |                  | 23-Jan-2019 10:30    | ----  | ----  | ----  | ----  |
| Compound                                            | CAS Number        | LOR | Unit    |                  | <b>EM1900929-038</b> | ----- | ----- | ----- | ----- |
|                                                     |                   |     |         | Result           | ----                 | ----  | ----  | ----  | ----  |
| <b>EA001: pH in soil using 0.01M CaCl extract</b>   |                   |     |         |                  |                      |       |       |       |       |
| pH (CaCl2)                                          | ----              | 0.1 | pH Unit |                  | <b>4.5</b>           | ----  | ----  | ----  | ----  |
| <b>EA055: Moisture Content (Dried @ 105-110°C)</b>  |                   |     |         |                  |                      |       |       |       |       |
| Moisture Content                                    | ----              | 1.0 | %       |                  | <b>11.3</b>          | ----  | ----  | ----  | ----  |
| <b>EG005T: Total Metals by ICP-AES</b>              |                   |     |         |                  |                      |       |       |       |       |
| Arsenic                                             | 7440-38-2         | 5   | mg/kg   |                  | <5                   | ----  | ----  | ----  | ----  |
| Cadmium                                             | 7440-43-9         | 1   | mg/kg   |                  | <1                   | ----  | ----  | ----  | ----  |
| Copper                                              | 7440-50-8         | 5   | mg/kg   |                  | <b>10</b>            | ----  | ----  | ----  | ----  |
| Lead                                                | 7439-92-1         | 5   | mg/kg   |                  | <b>14</b>            | ----  | ----  | ----  | ----  |
| Molybdenum                                          | 7439-98-7         | 2   | mg/kg   |                  | <2                   | ----  | ----  | ----  | ----  |
| Nickel                                              | 7440-02-0         | 2   | mg/kg   |                  | <b>7</b>             | ----  | ----  | ----  | ----  |
| Selenium                                            | 7782-49-2         | 5   | mg/kg   |                  | <5                   | ----  | ----  | ----  | ----  |
| Silver                                              | 7440-22-4         | 2   | mg/kg   |                  | <2                   | ----  | ----  | ----  | ----  |
| Tin                                                 | 7440-31-5         | 5   | mg/kg   |                  | <5                   | ----  | ----  | ----  | ----  |
| Zinc                                                | 7440-66-6         | 5   | mg/kg   |                  | <b>23</b>            | ----  | ----  | ----  | ----  |
| <b>EG035T: Total Recoverable Mercury by FIMS</b>    |                   |     |         |                  |                      |       |       |       |       |
| Mercury                                             | 7439-97-6         | 0.1 | mg/kg   |                  | <0.1                 | ----  | ----  | ----  | ----  |
| <b>EG048: Hexavalent Chromium (Alkaline Digest)</b> |                   |     |         |                  |                      |       |       |       |       |
| Hexavalent Chromium                                 | 18540-29-9        | 0.5 | mg/kg   |                  | <0.5                 | ----  | ----  | ----  | ----  |
| <b>EK026SF: Total CN by Segmented Flow Analyser</b> |                   |     |         |                  |                      |       |       |       |       |
| Total Cyanide                                       | 57-12-5           | 1   | mg/kg   |                  | <b>2</b>             | ----  | ----  | ----  | ----  |
| <b>EK040T: Fluoride Total</b>                       |                   |     |         |                  |                      |       |       |       |       |
| Fluoride                                            | 16984-48-8        | 40  | mg/kg   |                  | <b>240</b>           | ----  | ----  | ----  | ----  |
| <b>EP066: Polychlorinated Biphenyls (PCB)</b>       |                   |     |         |                  |                      |       |       |       |       |
| Total Polychlorinated biphenyls                     | ----              | 0.1 | mg/kg   |                  | <0.1                 | ----  | ----  | ----  | ----  |
| <b>EP074A: Monocyclic Aromatic Hydrocarbons</b>     |                   |     |         |                  |                      |       |       |       |       |
| Benzene                                             | 71-43-2           | 0.2 | mg/kg   |                  | <0.2                 | ----  | ----  | ----  | ----  |
| Toluene                                             | 108-88-3          | 0.5 | mg/kg   |                  | <0.5                 | ----  | ----  | ----  | ----  |
| Ethylbenzene                                        | 100-41-4          | 0.5 | mg/kg   |                  | <0.5                 | ----  | ----  | ----  | ----  |
| meta- & para-Xylene                                 | 108-38-3 106-42-3 | 0.5 | mg/kg   |                  | <0.5                 | ----  | ----  | ----  | ----  |
| Styrene                                             | 100-42-5          | 0.5 | mg/kg   |                  | <0.5                 | ----  | ----  | ----  | ----  |
| ortho-Xylene                                        | 95-47-6           | 0.5 | mg/kg   |                  | <0.5                 | ----  | ----  | ----  | ----  |
| ^ Sum of monocyclic aromatic hydrocarbons           | ----              | 0.2 | mg/kg   |                  | <0.2                 | ----  | ----  | ----  | ----  |
| ^ Total Xylenes                                     | ----              | 0.5 | mg/kg   |                  | <0.5                 | ----  | ----  | ----  | ----  |





## Analytical Results

|                                                 |                   |      |       |                  |                   |       |       |       |       |
|-------------------------------------------------|-------------------|------|-------|------------------|-------------------|-------|-------|-------|-------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)              |                   |      |       | Client sample ID | FD03              | ----  | ----  | ----  | ----  |
| Client sampling date / time                     |                   |      |       |                  | 23-Jan-2019 10:30 | ----  | ----  | ----  | ----  |
| Compound                                        | CAS Number        | LOR  | Unit  |                  | EM1900929-038     | ----- | ----- | ----- | ----- |
|                                                 |                   |      |       |                  | Result            | ----  | ----  | ----  | ----  |
| <b>EP074H: Naphthalene</b>                      |                   |      |       |                  |                   |       |       |       |       |
| Naphthalene                                     | 91-20-3           | 1    | mg/kg |                  | <1                | ----  | ----  | ----  | ----  |
| <b>EP074I: Volatile Halogenated Compounds</b>   |                   |      |       |                  |                   |       |       |       |       |
| Vinyl chloride                                  | 75-01-4           | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| 1,1-Dichloroethene                              | 75-35-4           | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| Methylene chloride                              | 75-09-2           | 0.4  | mg/kg |                  | <0.4              | ----  | ----  | ----  | ----  |
| trans-1,2-Dichloroethene                        | 156-60-5          | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| cis-1,2-Dichloroethene                          | 156-59-2          | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| Chloroform                                      | 67-66-3           | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| 1,1,1-Trichloroethane                           | 71-55-6           | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| Carbon Tetrachloride                            | 56-23-5           | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| 1,2-Dichloroethane                              | 107-06-2          | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| Trichloroethene                                 | 79-01-6           | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| 1,1,2-Trichloroethane                           | 79-00-5           | 0.04 | mg/kg |                  | <0.04             | ----  | ----  | ----  | ----  |
| Tetrachloroethene                               | 127-18-4          | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| 1,1,1,2-Tetrachloroethane                       | 630-20-6          | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| 1,1,2,2-Tetrachloroethane                       | 79-34-5           | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| Hexachlorobutadiene                             | 87-68-3           | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| Chlorobenzene                                   | 108-90-7          | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| 1,4-Dichlorobenzene                             | 106-46-7          | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| 1,2-Dichlorobenzene                             | 95-50-1           | 0.02 | mg/kg |                  | <0.02             | ----  | ----  | ----  | ----  |
| 1,2,4-Trichlorobenzene                          | 120-82-1          | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| ^ Sum of volatile chlorinated hydrocarbons      | ----              | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| ^ Sum of other chlorinated hydrocarbons         | ----              | 0.01 | mg/kg |                  | <0.01             | ----  | ----  | ----  | ----  |
| <b>EP075A: Phenolic Compounds (Halogenated)</b> |                   |      |       |                  |                   |       |       |       |       |
| 2-Chlorophenol                                  | 95-57-8           | 0.03 | mg/kg |                  | <0.03             | ----  | ----  | ----  | ----  |
| 2,4-Dichlorophenol                              | 120-83-2          | 0.03 | mg/kg |                  | <0.03             | ----  | ----  | ----  | ----  |
| 2,6-Dichlorophenol                              | 87-65-0           | 0.03 | mg/kg |                  | <0.03             | ----  | ----  | ----  | ----  |
| 4-Chloro-3-methylphenol                         | 59-50-7           | 0.03 | mg/kg |                  | <0.03             | ----  | ----  | ----  | ----  |
| 2,4,5-Trichlorophenol                           | 95-95-4           | 0.05 | mg/kg |                  | <0.05             | ----  | ----  | ----  | ----  |
| 2,4,6-Trichlorophenol                           | 88-06-2           | 0.05 | mg/kg |                  | <0.05             | ----  | ----  | ----  | ----  |
| 2,3,5,6-Tetrachlorophenol                       | 935-95-5          | 0.03 | mg/kg |                  | <0.03             | ----  | ----  | ----  | ----  |
| 2,3,4,5 & 2,3,4,6-Tetrachlorophenol             | 4901-51-3/58-90-2 | 0.05 | mg/kg |                  | <0.05             | ----  | ----  | ----  | ----  |
| Pentachlorophenol                               | 87-86-5           | 0.2  | mg/kg |                  | <0.2              | ----  | ----  | ----  | ----  |
| ^ Sum of Phenols (halogenated)                  | ----              | 0.03 | mg/kg |                  | <0.03             | ----  | ----  | ----  | ----  |

|                                                   |            |     |      |                             |                   |       |       |       |       |
|---------------------------------------------------|------------|-----|------|-----------------------------|-------------------|-------|-------|-------|-------|
| Sub-Matrix: <b>SOIL</b><br>(Matrix: <b>SOIL</b> ) |            |     |      | Client sample ID            | FD03              | ----  | ----  | ----  | ----  |
|                                                   |            |     |      | Client sampling date / time | 23-Jan-2019 10:30 | ----  | ----  | ----  | ----  |
| Compound                                          | CAS Number | LOR | Unit |                             | EM1900929-038     | ----- | ----- | ----- | ----- |
|                                                   |            |     |      |                             | Result            | ----  | ----  | ----  | ----  |

| EP075A: Phenolic Compounds (Non-halogenated) |           |   |       |    |      |      |      |      |
|----------------------------------------------|-----------|---|-------|----|------|------|------|------|
| Phenol                                       | 108-95-2  | 1 | mg/kg | <1 | ---- | ---- | ---- | ---- |
| 2-Methylphenol                               | 95-48-7   | 1 | mg/kg | <1 | ---- | ---- | ---- | ---- |
| 3- & 4-Methylphenol                          | 1319-77-3 | 1 | mg/kg | <1 | ---- | ---- | ---- | ---- |
| 2-Nitrophenol                                | 88-75-5   | 1 | mg/kg | <1 | ---- | ---- | ---- | ---- |
| 2,4-Dimethylphenol                           | 105-67-9  | 1 | mg/kg | <1 | ---- | ---- | ---- | ---- |
| 2,4-Dinitrophenol                            | 51-28-5   | 5 | mg/kg | <5 | ---- | ---- | ---- | ---- |
| 4-Nitrophenol                                | 100-02-7  | 5 | mg/kg | <5 | ---- | ---- | ---- | ---- |
| 2-Methyl-4,6-dinitrophenol                   | 8071-51-0 | 5 | mg/kg | <5 | ---- | ---- | ---- | ---- |
| Dinoseb                                      | 88-85-7   | 5 | mg/kg | <5 | ---- | ---- | ---- | ---- |
| 2-Cyclohexyl-4,6-Dinitrophenol               | 131-89-5  | 5 | mg/kg | <5 | ---- | ---- | ---- | ---- |
| ^ Sum of Phenols (non-halogenated)           | ----      | 1 | mg/kg | <1 | ---- | ---- | ---- | ---- |

|                                           |                   |     |       |            |      |      |      |      |
|-------------------------------------------|-------------------|-----|-------|------------|------|------|------|------|
| Naphthalene                               | 91-20-3           | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Acenaphthene                              | 83-32-9           | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Acenaphthylene                            | 208-96-8          | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Fluorene                                  | 86-73-7           | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Phenanthrene                              | 85-01-8           | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Anthracene                                | 120-12-7          | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Fluoranthene                              | 206-44-0          | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Pyrene                                    | 129-00-0          | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Benz(a)anthracene                         | 56-55-3           | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Chrysene                                  | 218-01-9          | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Benzo(b+j) &<br>Benzo(k)fluoranthene      | 205-99-2 207-08-9 | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Benzo(a)pyrene                            | 50-32-8           | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Indeno(1.2.3.cd)pyrene                    | 193-39-5          | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Dibenz(a.h)anthracene                     | 53-70-3           | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| Benzo(g.h.i)perylene                      | 191-24-2          | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| ^ Sum of polycyclic aromatic hydrocarbons | ----              | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| ^ Benzo(a)pyrene TEQ (zero)               | ----              | 0.5 | mg/kg | <0.5       | ---- | ---- | ---- | ---- |
| ^ Benzo(a)pyrene TEQ (half LOR)           | ----              | 0.5 | mg/kg | <b>0.6</b> | ---- | ---- | ---- | ---- |
| ^ Benzo(a)pyrene TEQ (LOR)                | ----              | 0.5 | mg/kg | <b>1.2</b> | ---- | ---- | ---- | ---- |

## EP075I: Organochlorine Pesticides



## Analytical Results

Sub-Matrix: SOIL  
 (Matrix: SOIL)

Client sample ID

|          |            |     |      |                   |       |       |       |       |
|----------|------------|-----|------|-------------------|-------|-------|-------|-------|
|          |            |     |      | FD03              | ----  | ----  | ----  | ----  |
|          |            |     |      | 23-Jan-2019 10:30 | ----  | ----  | ----  | ----  |
| Compound | CAS Number | LOR | Unit | EM1900929-038     | ----- | ----- | ----- | ----- |
|          |            |     |      | Result            | ----  | ----  | ----  | ----  |

### EP075I: Organochlorine Pesticides - Continued

|                                          |                         |      |       |       |      |      |      |      |
|------------------------------------------|-------------------------|------|-------|-------|------|------|------|------|
| alpha-BHC                                | 319-84-6                | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Hexachlorobenzene (HCB)                  | 118-74-1                | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| beta-BHC                                 | 319-85-7                | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| gamma-BHC                                | 58-89-9                 | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| delta-BHC                                | 319-86-8                | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Heptachlor                               | 76-44-8                 | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Aldrin                                   | 309-00-2                | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Heptachlor epoxide                       | 1024-57-3               | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| cis-Chlordane                            | 5103-71-9               | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| trans-Chlordane                          | 5103-74-2               | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Endosulfan 1                             | 959-98-8                | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| 4,4'-DDE                                 | 72-55-9                 | 0.05 | mg/kg | <0.05 | ---- | ---- | ---- | ---- |
| Dieldrin                                 | 60-57-1                 | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Endrin aldehyde                          | 7421-93-4               | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Endrin                                   | 72-20-8                 | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| Endosulfan 2                             | 33213-65-9              | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| 4,4'-DDD                                 | 72-54-8                 | 0.05 | mg/kg | <0.05 | ---- | ---- | ---- | ---- |
| Endosulfan sulfate                       | 1031-07-8               | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| 4,4'-DDT                                 | 50-29-3                 | 0.05 | mg/kg | <0.05 | ---- | ---- | ---- | ---- |
| Methoxychlor                             | 72-43-5                 | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| ^ Sum of organochlorine pesticides       | ----                    | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| ^ Sum of Aldrin + Dieldrin               | 309-00-2/60-57-1        | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| ^ Sum of DDD + DDE + DDT                 | 72-54-8/72-55-9/50-29-3 | 0.05 | mg/kg | <0.05 | ---- | ---- | ---- | ---- |
| ^ Chlordane                              | 57-74-9                 | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |
| ^ Sum of other organochlorine pesticides | ----                    | 0.03 | mg/kg | <0.03 | ---- | ---- | ---- | ---- |

### EP080/071: Total Petroleum Hydrocarbons

|                            |        |     |       |     |      |      |      |      |
|----------------------------|--------|-----|-------|-----|------|------|------|------|
| C6 - C9 Fraction           | ----   | 10  | mg/kg | <10 | ---- | ---- | ---- | ---- |
| C10 - C14 Fraction         | ----   | 50  | mg/kg | <50 | ---- | ---- | ---- | ---- |
| C6 - C10 Fraction          | C6_C10 | 10  | mg/kg | <10 | ---- | ---- | ---- | ---- |
| C15 - C28 Fraction         | ----   | 100 | mg/kg | 150 | ---- | ---- | ---- | ---- |
| C29 - C36 Fraction         | ----   | 100 | mg/kg | 270 | ---- | ---- | ---- | ---- |
| ^ C10 - C36 Fraction (sum) | ----   | 50  | mg/kg | 420 | ---- | ---- | ---- | ---- |

### EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions

|                     |      |    |       |     |      |      |      |      |
|---------------------|------|----|-------|-----|------|------|------|------|
| >C10 - C16 Fraction | ---- | 50 | mg/kg | <50 | ---- | ---- | ---- | ---- |
|---------------------|------|----|-------|-----|------|------|------|------|



## Analytical Results

|                                                                             |             |       |       |                  |                   |       |       |       |       |
|-----------------------------------------------------------------------------|-------------|-------|-------|------------------|-------------------|-------|-------|-------|-------|
| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                          |             |       |       | Client sample ID | FD03              | ----  | ----  | ----  | ----  |
| Client sampling date / time                                                 |             |       |       |                  | 23-Jan-2019 10:30 | ----  | ----  | ----  | ----  |
| Compound                                                                    | CAS Number  | LOR   | Unit  |                  | EM1900929-038     | ----- | ----- | ----- | ----- |
|                                                                             |             |       |       |                  | Result            | ----  | ----  | ----  | ----  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued |             |       |       |                  |                   |       |       |       |       |
| >C16 - C34 Fraction                                                         | ----        | 100   | mg/kg |                  | 350               | ----  | ----  | ----  | ----  |
| >C34 - C40 Fraction                                                         | ----        | 100   | mg/kg |                  | 130               | ----  | ----  | ----  | ----  |
| ^ >C10 - C40 Fraction (sum)                                                 | ----        | 50    | mg/kg |                  | 480               | ----  | ----  | ----  | ----  |
| >C10 - C16 Fraction minus Naphthalene (F2)                                  | ----        | 50    | mg/kg |                  | <50               | ----  | ----  | ----  | ----  |
| C6 - C10 Fraction minus BTEX (F1)                                           | C6_C10-BTEX | 10    | mg/kg |                  | <10               | ----  | ----  | ----  | ----  |
| EP066S: PCB Surrogate                                                       |             |       |       |                  |                   |       |       |       |       |
| Decachlorobiphenyl                                                          | 2051-24-3   | 0.1   | %     |                  | 116               | ----  | ----  | ----  | ----  |
| EP074S: VOC Surrogates (Ultra-Trace)                                        |             |       |       |                  |                   |       |       |       |       |
| 1,2-Dichloroethane-D4                                                       | 17060-07-0  | 0.1   | %     |                  | 77.9              | ----  | ----  | ----  | ----  |
| Toluene-D8                                                                  | 2037-26-5   | 0.1   | %     |                  | 83.2              | ----  | ----  | ----  | ----  |
| 4-Bromofluorobenzene                                                        | 460-00-4    | 0.1   | %     |                  | 80.5              | ----  | ----  | ----  | ----  |
| EP075S: Acid Extractable Surrogates (Waste Classification)                  |             |       |       |                  |                   |       |       |       |       |
| Phenol-d6                                                                   | 13127-88-3  | 0.025 | %     |                  | 97.9              | ----  | ----  | ----  | ----  |
| 2-Chlorophenol-D4                                                           | 93951-73-6  | 0.025 | %     |                  | 78.6              | ----  | ----  | ----  | ----  |
| 2,4,6-Tribromophenol                                                        | 118-79-6    | 0.025 | %     |                  | 106               | ----  | ----  | ----  | ----  |
| EP075T: Base/Neutral Extractable Surrogates (Waste Classification)          |             |       |       |                  |                   |       |       |       |       |
| Nitrobenzene-D5                                                             | 4165-60-0   | 0.025 | %     |                  | 93.0              | ----  | ----  | ----  | ----  |
| 1,2-Dichlorobenzene-D4                                                      | 2199-69-1   | 0.025 | %     |                  | 88.0              | ----  | ----  | ----  | ----  |
| 2-Fluorobiphenyl                                                            | 321-60-8    | 0.025 | %     |                  | 102               | ----  | ----  | ----  | ----  |
| Anthracene-d10                                                              | 1719-06-8   | 0.025 | %     |                  | 97.6              | ----  | ----  | ----  | ----  |
| 4-Terphenyl-d14                                                             | 1718-51-0   | 0.025 | %     |                  | 93.8              | ----  | ----  | ----  | ----  |





## Analytical Results

|                                                                        |                   |     |      |                  |                   |                   |       |       |       |
|------------------------------------------------------------------------|-------------------|-----|------|------------------|-------------------|-------------------|-------|-------|-------|
| Sub-Matrix: <b>WATER</b><br>(Matrix: <b>WATER</b> )                    |                   |     |      | Client sample ID | TB01              | TB02              | ----  | ----  | ----  |
| Client sampling date / time                                            |                   |     |      |                  | 22-Jan-2019 12:00 | 23-Jan-2019 12:00 | ----  | ----  | ----  |
| Compound                                                               | CAS Number        | LOR | Unit |                  | EM1900929-039     | EM1900929-040     | ----- | ----- | ----- |
|                                                                        |                   |     |      |                  | Result            | Result            | ----  | ----  | ----  |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                         |                   |     |      |                  |                   |                   |       |       |       |
| C6 - C9 Fraction                                                       | ----              | 20  | µg/L |                  | <20               | <20               | ----  | ----  | ----  |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b> |                   |     |      |                  |                   |                   |       |       |       |
| C6 - C10 Fraction                                                      | C6_C10            | 20  | µg/L |                  | <20               | <20               | ----  | ----  | ----  |
| ^ C6 - C10 Fraction minus BTEX (F1)                                    | C6_C10-BTEX       | 20  | µg/L |                  | <20               | <20               | ----  | ----  | ----  |
| <b>EP080: BTEXN</b>                                                    |                   |     |      |                  |                   |                   |       |       |       |
| Benzene                                                                | 71-43-2           | 1   | µg/L |                  | <1                | <1                | ----  | ----  | ----  |
| Toluene                                                                | 108-88-3          | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| Ethylbenzene                                                           | 100-41-4          | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| meta- & para-Xylene                                                    | 108-38-3 106-42-3 | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| ortho-Xylene                                                           | 95-47-6           | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| ^ Total Xylenes                                                        | ----              | 2   | µg/L |                  | <2                | <2                | ----  | ----  | ----  |
| ^ Sum of BTEX                                                          | ----              | 1   | µg/L |                  | <1                | <1                | ----  | ----  | ----  |
| Naphthalene                                                            | 91-20-3           | 5   | µg/L |                  | <5                | <5                | ----  | ----  | ----  |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>                                  |                   |     |      |                  |                   |                   |       |       |       |
| 1,2-Dichloroethane-D4                                                  | 17060-07-0        | 2   | %    |                  | 95.4              | 96.1              | ----  | ----  | ----  |
| Toluene-D8                                                             | 2037-26-5         | 2   | %    |                  | 86.2              | 83.1              | ----  | ----  | ----  |
| 4-Bromofluorobenzene                                                   | 460-00-4          | 2   | %    |                  | 93.3              | 92.7              | ----  | ----  | ----  |



## Analytical Results

### Descriptive Results

Sub-Matrix: **SOIL**

| Method: Compound                                                 | Client sample ID - Client sampling date / time | Analytical Results                           |
|------------------------------------------------------------------|------------------------------------------------|----------------------------------------------|
| <b>EA200: AS 4964 - 2004 Identification of Asbestos in Soils</b> |                                                |                                              |
| EA200: Description                                               | TP02_0.1 - 22-Jan-2019 09:00                   | Brown rocky soil.                            |
| EA200: Description                                               | TP03_0.1 - 22-Jan-2019 09:40                   | Brown clay like soil with organic matter.    |
| EA200: Description                                               | TP04_0.2 - 22-Jan-2019 13:00                   | Brown soil with rock and organic matter.     |
| EA200: Description                                               | TP05_0.1 - 23-Jan-2019 07:10                   | Brown rocky soil.                            |
| EA200: Description                                               | TP06_0.1 - 23-Jan-2019 08:00                   | Brown clay like soil with organic matter.    |
| EA200: Description                                               | TP07_0.1 - 23-Jan-2019 08:40                   | Brown clay like soil with organic matter.    |
| EA200: Description                                               | TP08_0.1 - 23-Jan-2019 09:20                   | Brown clay like soil with organic matter.    |
| EA200: Description                                               | TP09_0.1 - 23-Jan-2019 10:00                   | Brown rocky soil with organic matter.        |
| EA200: Description                                               | CS01 - 22-Jan-2019 11:00                       | Brown clay like soil with organic matter.    |
| EA200: Description                                               | CS02 - 22-Jan-2019 11:10                       | Brown clay like soil with organic matter.    |
| EA200: Description                                               | CS03 - 22-Jan-2019 11:20                       | Brown clay like soil with organic matter.    |
| EA200: Description                                               | CS04 - 22-Jan-2019 11:30                       | Brown clay like soil with organic matter.    |
| EA200: Description                                               | CS05 - 22-Jan-2019 11:40                       | Brown clay like soil with organic matter.    |
| EA200: Description                                               | CS06 - 22-Jan-2019 11:50                       | Grey tan clay like soil with organic matter. |
| EA200: Description                                               | CS07 - 22-Jan-2019 12:30                       | Brown clay like soil with organic matter.    |
| EA200: Description                                               | CS08 - 22-Jan-2019 12:40                       | Grey tan clay like soil with organic matter. |



## Surrogate Control Limits

| Sub-Matrix: SOIL                                                          |            | Recovery Limits (%) |      |
|---------------------------------------------------------------------------|------------|---------------------|------|
| Compound                                                                  | CAS Number | Low                 | High |
| <b>EP066S: PCB Surrogate</b>                                              |            |                     |      |
| Decachlorobiphenyl                                                        | 2051-24-3  | 36                  | 140  |
| <b>EP068S: Organochlorine Pesticide Surrogate</b>                         |            |                     |      |
| Dibromo-DDE                                                               | 21655-73-2 | 38                  | 128  |
| <b>EP068T: Organophosphorus Pesticide Surrogate</b>                       |            |                     |      |
| DEF                                                                       | 78-48-8    | 33                  | 139  |
| <b>EP074S: VOC Surrogates (Ultra-Trace)</b>                               |            |                     |      |
| 1,2-Dichloroethane-D4                                                     | 17060-07-0 | 59                  | 119  |
| Toluene-D8                                                                | 2037-26-5  | 55                  | 117  |
| 4-Bromofluorobenzene                                                      | 460-00-4   | 59                  | 123  |
| <b>EP075(SIM)S: Phenolic Compound Surrogates</b>                          |            |                     |      |
| Phenol-d6                                                                 | 13127-88-3 | 54                  | 125  |
| 2-Chlorophenol-D4                                                         | 93951-73-6 | 65                  | 123  |
| 2,4,6-Tribromophenol                                                      | 118-79-6   | 34                  | 122  |
| <b>EP075(SIM)T: PAH Surrogates</b>                                        |            |                     |      |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 61                  | 125  |
| Anthracene-d10                                                            | 1719-06-8  | 62                  | 130  |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 67                  | 133  |
| <b>EP075S: Acid Extractable Surrogates (Waste Classification)</b>         |            |                     |      |
| Phenol-d6                                                                 | 13127-88-3 | 28                  | 134  |
| 2-Chlorophenol-D4                                                         | 93951-73-6 | 27                  | 123  |
| 2,4,6-Tribromophenol                                                      | 118-79-6   | 25                  | 149  |
| <b>EP075T: Base/Neutral Extractable Surrogates (Waste Classification)</b> |            |                     |      |
| Nitrobenzene-D5                                                           | 4165-60-0  | 29                  | 125  |
| 1,2-Dichlorobenzene-D4                                                    | 2199-69-1  | 31                  | 117  |
| 2-Fluorobiphenyl                                                          | 321-60-8   | 44                  | 136  |
| Anthracene-d10                                                            | 1719-06-8  | 53                  | 133  |
| 4-Terphenyl-d14                                                           | 1718-51-0  | 59                  | 141  |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>                                     |            |                     |      |
| 1,2-Dichloroethane-D4                                                     | 17060-07-0 | 51                  | 125  |
| Toluene-D8                                                                | 2037-26-5  | 55                  | 125  |
| 4-Bromofluorobenzene                                                      | 460-00-4   | 56                  | 124  |
| Sub-Matrix: WATER                                                         |            | Recovery Limits (%) |      |
| Compound                                                                  | CAS Number | Low                 | High |
| <b>EP080S: TPH(V)/BTEX Surrogates</b>                                     |            |                     |      |
| 1,2-Dichloroethane-D4                                                     | 17060-07-0 | 73                  | 129  |
| Toluene-D8                                                                | 2037-26-5  | 70                  | 125  |
| 4-Bromofluorobenzene                                                      | 460-00-4   | 71                  | 129  |

## SAMPLE RECEIPT NOTIFICATION (SRN)

**Work Order : EM1900929**

|                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Client : <b>GHD PTY LTD</b></p> <p>Contact : KORY AUCH</p> <p>Address : LEVEL 8, 180 LONSDALE ST<br/>MELBOURNE VIC, AUSTRALIA 3001</p> <p>E-mail : kory.auch@ghd.com</p> <p>Telephone : ----</p> <p>Facsimile : ----</p> <p>Project : 3136558</p> <p>Order number : </p> <p>C-O-C number : ----</p> <p>Site : Wonthaggi PSP - Targeted Intrusive Investigation</p> <p>Sampler : KA</p> | <p>Laboratory : Environmental Division Melbourne</p> <p>Contact : Shirley LeCornu</p> <p>Address : 4 Westall Rd Springvale VIC Australia 3171</p> <p>E-mail : shirley.lecornu@Alsglobal.com</p> <p>Telephone : +6138549 9630</p> <p>Facsimile : +61-3-8549 9626</p> <p>Page : 1 of 4</p> <p>Quote number : ES2018GHDSE0025 (EN/005/18)</p> <p>QC Level : NEPM 2013 B3 &amp; ALS QC Standard</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### *Dates*

|                                           |                                               |
|-------------------------------------------|-----------------------------------------------|
| Date Samples Received : 23-Jan-2019 12:50 | Issue Date : 24-Jan-2019                      |
| Client Requested Due : 31-Jan-2019        | Scheduled Reporting Date : <b>31-Jan-2019</b> |
| Date                                      |                                               |

### *Delivery Details*

|                            |                                              |
|----------------------------|----------------------------------------------|
| Mode of Delivery : Carrier | Security Seal : Not Available                |
| No. of coolers/boxes : 2   | Temperature : 12.9°C - Ice present           |
| Receipt Detail :           | No. of samples received / analysed : 41 / 23 |

### *General Comments*

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**





## Sample Container(s)/Preservation Non-Compliances

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

- No sample container / preservation non-compliance exists.

## Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

| Laboratory sample ID | Client sampling date / time | Client sample ID | (On Hold) SOIL<br>No analysis requested | SOIL - EA055-103<br>Moisture Content | SOIL - EA200<br>Asbestos Identification in Soils - | SOIL - P-16<br>IWRG 621 | SOIL - S-13<br>OC/OP/PCB | SOIL - S-24<br>TRH/TEXN/PAH + Phenols |
|----------------------|-----------------------------|------------------|-----------------------------------------|--------------------------------------|----------------------------------------------------|-------------------------|--------------------------|---------------------------------------|
| EM1900929-001        | 22-Jan-2019 07:30           | TP01_0.5         |                                         | ✓                                    |                                                    |                         | ✓                        | ✓                                     |
| EM1900929-002        | 22-Jan-2019 07:45           | TP01_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-003        | 22-Jan-2019 09:00           | TP02_0.1         |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-004        | 22-Jan-2019 09:10           | TP02_0.5         |                                         | ✓                                    |                                                    |                         | ✓                        | ✓                                     |
| EM1900929-005        | 22-Jan-2019 09:20           | TP02_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-006        | 22-Jan-2019 09:40           | TP03_0.1         |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-007        | 22-Jan-2019 09:50           | TP03_0.5         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-008        | 22-Jan-2019 10:00           | TP03_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-009        | 22-Jan-2019 13:00           | TP04_0.2         |                                         | ✓                                    | ✓                                                  | ✓                       |                          |                                       |
| EM1900929-010        | 22-Jan-2019 13:10           | TP04_0.5         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-011        | 22-Jan-2019 13:20           | TP04_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-012        | 23-Jan-2019 07:10           | TP05_0.1         |                                         | ✓                                    | ✓                                                  | ✓                       |                          |                                       |
| EM1900929-013        | 23-Jan-2019 07:20           | TP05_0.5         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-014        | 23-Jan-2019 07:30           | TP05_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-015        | 23-Jan-2019 08:00           | TP06_0.1         |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-016        | 23-Jan-2019 08:10           | TP06_0.5         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-017        | 23-Jan-2019 08:20           | TP06_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-018        | 23-Jan-2019 08:40           | TP07_0.1         |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-019        | 23-Jan-2019 08:50           | TP07_0.5         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-020        | 23-Jan-2019 09:00           | TP07_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-021        | 23-Jan-2019 09:20           | TP08_0.1         |                                         | ✓                                    | ✓                                                  | ✓                       |                          |                                       |
| EM1900929-022        | 23-Jan-2019 09:30           | TP08_0.5         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-023        | 23-Jan-2019 09:40           | TP08_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-024        | 23-Jan-2019 09:50           | TP08_2.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-025        | 23-Jan-2019 10:00           | TP09_0.1         |                                         | ✓                                    | ✓                                                  | ✓                       |                          |                                       |
| EM1900929-026        | 23-Jan-2019 10:10           | TP09_0.5         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-027        | 23-Jan-2019 10:20           | TP09_1.0         | ✓                                       |                                      |                                                    |                         |                          |                                       |
| EM1900929-028        | 22-Jan-2019 11:00           | CS01             |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-029        | 22-Jan-2019 11:10           | CS02             |                                         | ✓                                    | ✓                                                  | ✓                       |                          |                                       |
| EM1900929-030        | 22-Jan-2019 11:20           | CS03             |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-031        | 22-Jan-2019 11:30           | CS04             |                                         | ✓                                    | ✓                                                  | ✓                       |                          |                                       |
| EM1900929-032        | 22-Jan-2019 11:40           | CS05             |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-033        | 22-Jan-2019 11:50           | CS06             |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |
| EM1900929-034        | 22-Jan-2019 12:30           | CS07             |                                         | ✓                                    | ✓                                                  | ✓                       |                          |                                       |
| EM1900929-035        | 22-Jan-2019 12:40           | CS08             |                                         | ✓                                    | ✓                                                  |                         | ✓                        | ✓                                     |



|               |                   |      | (On Hold) SOIL<br>No analysis requested | SOIL - EA055-103<br>Moisture Content | SOIL - EA200<br>Asbestos Identification in Soils - | SOIL - P-16<br>WRG 621 | SOIL - S-13<br>OC/OP/PCB | SOIL - S-24<br>TRH/BTEXN/PAH + Phenols |
|---------------|-------------------|------|-----------------------------------------|--------------------------------------|----------------------------------------------------|------------------------|--------------------------|----------------------------------------|
| EM1900929-036 | 22-Jan-2019 09:00 | FD01 |                                         | ✓                                    |                                                    |                        | ✓                        | ✓                                      |
| EM1900929-037 | 22-Jan-2019 10:30 | FD02 |                                         | ✓                                    |                                                    | ✓                      |                          |                                        |
| EM1900929-038 | 23-Jan-2019 10:30 | FD03 |                                         | ✓                                    |                                                    | ✓                      |                          |                                        |

Matrix: **SOLID**

| Laboratory sample ID | Client sampling date / time | Client sample ID   | (On Hold) SOLID<br>No analysis requested |
|----------------------|-----------------------------|--------------------|------------------------------------------|
| EM1900929-041        | 22-Jan-2019 00:00           | TP04_0.5 ACM Sheet | ✓                                        |

Matrix: **WATER**

| Laboratory sample ID | Client sampling date / time | Client sample ID | WATER - W-18<br>TRH(C6 - C9)/BTEXN |
|----------------------|-----------------------------|------------------|------------------------------------|
| EM1900929-039        | 22-Jan-2019 12:00           | TB01             | ✓                                  |
| EM1900929-040        | 23-Jan-2019 12:00           | TB02             | ✓                                  |

## Proactive Holding Time Report

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





**GHD Melbourne**  
180 Lonsdale Street, Melbourne 3000  
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|                                                             |  |                                               |  |                                          |  |                                                                                                                                                                                                                         |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
|-------------------------------------------------------------|--|-----------------------------------------------|--|------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------|--|----------------------|--|--------------------------------------------------------|--|-------------------------------------|--|----------------------------|--|--------------------------|--|--------------------------------------------|--|------|--|
| Job Number<br>3136558                                       |  | GHD Office<br>Melbourne                       |  | Laboratory:<br>ALS Springvale            |  | PLEASE NOTE:<br><br>Forwarded to<br>Secondary Lab<br>Date 24/1/2019<br>- E-mail results to the GHD Contact with the GHD Job Number in the e-mail subject line.<br><br>Results to be provided in ESDAT compatible format |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| Project<br>Wonthaggi PSP - Targeted Intrusive Investigation |  |                                               |  | Address:<br>2 - 4 Westall Rd, Springvale |  |                                                                                                                                                                                                                         |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| GHD Contact<br>Kory Auch                                    |  | Contact Email<br>kory.auch@ghd.com            |  | Lab Contact:<br>Shirley LeCornu          |  |                                                                                                                                                                                                                         |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| Standard TAT                                                |  | Quote No./GHD Reference<br>EN/005/18 (Vic BQ) |  | Analyses Required                        |  |                                                                                                                                                                                                                         |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| Sample ID                                                   |  | Date                                          |  | Time                                     |  | Sample Matrix<br>S: Soil<br>SL: Sludge<br>W: Water<br>A: Air<br>GW: Groundwater                                                                                                                                         |  | Container Type<br>J: soil jar<br>B: bag<br>V: vial<br>G: glass bottle<br>P: plastic bottle |  | IWRG621 suite (P-16) |  | TRH (C6-C40) / BTEXN / PAH / Phenols / OC / OP / PCB / |  | Asbestos (presence/absence) (EA200) |  | TRH (C10-C40) (Silica Gel) |  | TRH(C6-C10)/BTEXN (W-18) |  | Forward To Eurobis for equivalent analysis |  | HOLD |  |
| TP01_0.1                                                    |  | 22 / Jan / 2019                               |  | 07:30                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  | X                                                      |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| TP01_0.5                                                    |  | 22 / Jan / 2019                               |  | 07:45                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP01_1.0                                                    |  | 22 / Jan / 2019                               |  | 07:45                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP01_2.0                                                    |  | 22 / Jan / 2019                               |  | 09:00                                    |  | S                                                                                                                                                                                                                       |  | J, 1b                                                                                      |  |                      |  | X                                                      |  | X                                   |  |                            |  |                          |  |                                            |  |      |  |
| TP02_0.1                                                    |  | 22 / Jan / 2019                               |  | 09:10                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  | X                                                      |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| TP02_0.5                                                    |  | 22 / Jan / 2019                               |  | 09:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP02_1.0                                                    |  | 22 / Jan / 2019                               |  | 09:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP02_2.0                                                    |  | 22 / Jan / 2019                               |  | 09:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP03 - stockpile                                            |  | 22 / Jan / 2019                               |  | 09:40                                    |  | S                                                                                                                                                                                                                       |  | J, 1b                                                                                      |  |                      |  | X                                                      |  | X                                   |  |                            |  |                          |  |                                            |  |      |  |
| TP04 - stockpile                                            |  | 22 / Jan / 2019                               |  | 09:50                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP05 - stockpile                                            |  | 22 / Jan / 2019                               |  | 10:00                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP06 - stockpile                                            |  | 22 / Jan / 2019                               |  | 13:00                                    |  | S                                                                                                                                                                                                                       |  | J, 1b                                                                                      |  | X                    |  |                                                        |  | X                                   |  |                            |  |                          |  |                                            |  | X    |  |
| TP07 - stockpile                                            |  | 22 / Jan / 2019                               |  | 13:10                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP03 - 0.1                                                  |  | 22 / Jan / 2019                               |  | 13:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP03 - 0.5                                                  |  | 22 / Jan / 2019                               |  | 13:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP03 - 1.0                                                  |  | 22 / Jan / 2019                               |  | 13:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP04 - 0.2                                                  |  | 22 / Jan / 2019                               |  | 13:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP04 - 0.5                                                  |  | 22 / Jan / 2019                               |  | 13:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| TP04 - 1.0                                                  |  | 22 / Jan / 2019                               |  | 13:20                                    |  | S                                                                                                                                                                                                                       |  | J                                                                                          |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  | X    |  |
| Sampled by:                                                 |  | Kory Auch / TLM                               |  | Date/Time:                               |  | 23/01/2019                                                                                                                                                                                                              |  | Relinquished                                                                               |  | Kory Auch / TLM      |  | Date/Time:                                             |  | 23/01/2019 @ 12:45                  |  |                            |  |                          |  |                                            |  |      |  |
| Received by:                                                |  |                                               |  | Date/Time:                               |  |                                                                                                                                                                                                                         |  | Relinquished                                                                               |  |                      |  | Date/Time:                                             |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| Received by Courier:                                        |  |                                               |  | Date/Time:                               |  |                                                                                                                                                                                                                         |  | Relinquished                                                                               |  |                      |  | Date/Time:                                             |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| Received by Lab:                                            |  | Alice (ACS)                                   |  | Date/Time:                               |  | 23/1/19 12:50                                                                                                                                                                                                           |  | Relinquished                                                                               |  |                      |  | Date/Time:                                             |  |                                     |  |                            |  |                          |  |                                            |  |      |  |
| Remarks:                                                    |  | Please CC reports to GHD Lab Reports email    |  |                                          |  |                                                                                                                                                                                                                         |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                            |  |                          |  |                                            |  |      |  |



**GHD**



Telephone: 613 8687 8000 Facsimile: 613 8687 8111

|                                                             |  |                                               |  |                                 |  |                                                                                                                                                                      |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------|--|-----------------------------------------------|--|---------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------|--|--------------------|--|--|--|--|--|--|--|--|--|
| Job Number<br>3136558                                       |  | GHD Office<br>Melbourne                       |  | Laboratory:<br>ALS Springvale   |  | PLEASE NOTE:<br><br>- E-mail results to the GHD Contact with the GHD Job Number in the e-mail subject line.<br><br>Results to be provided in ESDAT compatible format |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| Project<br>Wonthaggi PSP - Targeted Intrusive Investigation |  | Address:<br>2 - 4 Westall Rd, Springvale      |  | Lab Contact:<br>Shirley LeCornu |  |                                                                                                                                                                      |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| GHD Contact<br>Kory Auch                                    |  | Contact Email<br>kory_auch@ghd.com            |  |                                 |  |                                                                                                                                                                      |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| Standard TAT                                                |  | Quote No./GHD Reference<br>EN/005/18 (Vic BQ) |  |                                 |  |                                                                                                                                                                      |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| Sample ID                                                   |  | Date                                          |  | Time                            |  | Sample Matrix                                                                                                                                                        |  | Container Type                                                        |  | Analyses Required                                                                                                                                                                              |  |            |  |                    |  |  |  |  |  |  |  |  |  |
|                                                             |  |                                               |  |                                 |  | S: soil jar B: bag<br>L: soil L: Sludge W: Water A: Air<br>G: GHD bucket water                                                                                       |  | J: soil jar B: bag<br>V: vial<br>G: glass bottle<br>P: plastic bottle |  | IWRG621 suite (P-16)<br>TRH (C6-C40) / BTEXN /<br>PAH / Phenols / OC / OP /<br>PCB /<br>Asbestos (presence/absence)<br>(EA200)<br>TRH (C10-C40) (Silica Gel)<br>TRH (C6-C10) / BTEXN<br>(W-18) |  |            |  |                    |  |  |  |  |  |  |  |  |  |
|                                                             |  |                                               |  |                                 |  |                                                                                                                                                                      |  |                                                                       |  |                                                                                                                                                                                                |  | HOLD       |  |                    |  |  |  |  |  |  |  |  |  |
|                                                             |  |                                               |  |                                 |  |                                                                                                                                                                      |  |                                                                       |  |                                                                                                                                                                                                |  | Remarks    |  |                    |  |  |  |  |  |  |  |  |  |
| TP05_0.1                                                    |  | 23 / Jan / 2019                               |  | 07:10                           |  | S                                                                                                                                                                    |  | J, 1b                                                                 |  | X                                                                                                                                                                                              |  | X          |  |                    |  |  |  |  |  |  |  |  |  |
| TP05_0.5                                                    |  | 23 / Jan / 2019                               |  | 07:20                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP05_1.0                                                    |  | 23 / Jan / 2019                               |  | 07:30                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP06_0.1                                                    |  | 23 / Jan / 2019                               |  | 08:00                           |  | S                                                                                                                                                                    |  | J, 1b                                                                 |  | X                                                                                                                                                                                              |  | X          |  |                    |  |  |  |  |  |  |  |  |  |
| TP06_0.5                                                    |  | 23 / Jan / 2019                               |  | 08:10                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP06_1.0                                                    |  | 23 / Jan / 2019                               |  | 08:20                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP07_0.1                                                    |  | 23 / Jan / 2019                               |  | 08:40                           |  | S                                                                                                                                                                    |  | J, 1b                                                                 |  | X                                                                                                                                                                                              |  | X          |  |                    |  |  |  |  |  |  |  |  |  |
| TP07_0.5                                                    |  | 23 / Jan / 2019                               |  | 08:50                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP07_1.0                                                    |  | 23 / Jan / 2019                               |  | 09:00                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP08_0.1                                                    |  | 23 / Jan / 2019                               |  | 09:20                           |  | S                                                                                                                                                                    |  | J, 1b                                                                 |  | X                                                                                                                                                                                              |  | X          |  |                    |  |  |  |  |  |  |  |  |  |
| TP08_0.5                                                    |  | 23 / Jan / 2019                               |  | 09:30                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP08_1.0                                                    |  | 23 / Jan / 2019                               |  | 09:40                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP08_2.0                                                    |  | 23 / Jan / 2019                               |  | 09:50                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP09_0.1                                                    |  | 23 / Jan / 2019                               |  | 10:00                           |  | S                                                                                                                                                                    |  | J, 1b                                                                 |  | X                                                                                                                                                                                              |  | X          |  |                    |  |  |  |  |  |  |  |  |  |
| TP09_0.5                                                    |  | 23 / Jan / 2019                               |  | 10:10                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP09_1.0                                                    |  | 23 / Jan / 2019                               |  | 10:20                           |  | S                                                                                                                                                                    |  | J                                                                     |  |                                                                                                                                                                                                |  |            |  | X                  |  |  |  |  |  |  |  |  |  |
| TP14_0.1                                                    |  | / Jan / 2019                                  |  |                                 |  | S                                                                                                                                                                    |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| TP14_0.5                                                    |  | / Jan / 2019                                  |  |                                 |  | S                                                                                                                                                                    |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| TP14_1.0                                                    |  | / Jan / 2019                                  |  |                                 |  | S                                                                                                                                                                    |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| TP14_2.0                                                    |  | / Jan / 2019                                  |  |                                 |  | S                                                                                                                                                                    |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |
| Sampled by:                                                 |  | Kory Auch / [Signature]                       |  | Date/Time:                      |  | 23/01/2019                                                                                                                                                           |  | Relinquished                                                          |  | Kory Auch / [Signature]                                                                                                                                                                        |  | Date/Time: |  | 23/01/2019 @ 12:45 |  |  |  |  |  |  |  |  |  |
| Received by:                                                |  |                                               |  | Date/Time:                      |  |                                                                                                                                                                      |  | Relinquished                                                          |  |                                                                                                                                                                                                |  | Date/Time: |  |                    |  |  |  |  |  |  |  |  |  |
| Received by Courier:                                        |  |                                               |  | Date/Time:                      |  |                                                                                                                                                                      |  | Relinquished                                                          |  |                                                                                                                                                                                                |  | Date/Time: |  |                    |  |  |  |  |  |  |  |  |  |
| Received by Lab:                                            |  | Alice (ALS)                                   |  | Date/Time:                      |  | 23/1/19 12:50                                                                                                                                                        |  | Relinquished                                                          |  |                                                                                                                                                                                                |  | Date/Time: |  |                    |  |  |  |  |  |  |  |  |  |
| Remarks:                                                    |  | Please CC reports to GHD Lab Reports email    |  |                                 |  |                                                                                                                                                                      |  |                                                                       |  |                                                                                                                                                                                                |  |            |  |                    |  |  |  |  |  |  |  |  |  |

## CHAIN OF CUSTODY RECORD

GHD



GHD Melbourne

180 Lonsdale Street, Melbourne 3000

Telephone: 613 8687 8000 Facsimile: 613 8687 8111

Page 3 of 4

| Job Number<br>3136558                                       |                                            | GHD Office<br>Melbourne                       |                                                                                  | Laboratory: ALS Springvale                                                                  |                                                        |              |                                |  |            |                    |  |  |  | PLEASE NOTE:<br><br>- E-mail results to the GHD Contact with the GHD Job Number in the e-mail subject line.<br><br>Results to be provided in ESDAT compatible format |  |                                                             |
|-------------------------------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------|--------------------------------|--|------------|--------------------|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------|
| Project<br>Wonthaggi PSP - Targeted Intrusive Investigation |                                            |                                               |                                                                                  | Address: 2 - 4 Westall Rd, Springvale                                                       |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| GHD Contact<br>Kory Auch                                    |                                            | Contact Email<br>kory.auch@ghd.com            |                                                                                  | Lab Contact: Shirley LeCornu                                                                |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| Standard TAT                                                |                                            | Quote No./GHD Reference<br>EN/005/18 (Vic BQ) |                                                                                  |                                                                                             |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| Sample ID                                                   | Date                                       | Time                                          | Sample Matrix:<br>S: Soil<br>A: Sludge<br>W: Water<br>G: Grit/Gravel<br>O: Other | Container Type:<br>J: Soil jar<br>B: Bag<br>V: Vial<br>G: Glass bottle<br>P: Plastic bottle | Analysis Required                                      | HOLD         |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  | Remarks                                                     |
| TP15_0.1                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           | 1WRG621 suite (P-16)                                   |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP15_0.5                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           | TRH (C6-C40) / BTEXN / PAH / Pheno's / OC / OP / PCB / |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP15_1.0                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           | Asbestos (presence/absence) (EA200)                    |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP15_2.0                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           | TRH (C10-C40) (Silica Gel)                             |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP16_0.1                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           | TRH (C6-C10) / BTEXN (W-18)                            |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP16_0.5                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP16_1.0                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP16_2.0                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP17_0.1                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP17_0.5                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP17_1.0                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| TP17_2.0                                                    | 21 / Jan / 2019                            |                                               | S                                                                                | J                                                                                           |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| CS01                                                        | 28                                         | 22 / Jan / 2019 11:00                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  | Note: Soil is wet because it was from a drainage canal<br>↓ |
| CS02                                                        | 29                                         | 22 / Jan / 2019 11:10                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| CS03                                                        | 30                                         | 22 / Jan / 2019 11:20                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| CS04                                                        | 31                                         | 22 / Jan / 2019 11:30                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| CS05                                                        | 32                                         | 22 / Jan / 2019 11:40                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| CS06                                                        | 33                                         | 22 / Jan / 2019 11:50                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| CS07                                                        | 34                                         | 23 / Jan / 2019 12:30                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| CS08                                                        | 35                                         | 22 / Jan / 2019 12:40                         | S                                                                                | J, 1b                                                                                       | X                                                      | X            |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| Sampled by:                                                 | Kory Auch / <i>[Signature]</i>             |                                               | Date/Time:                                                                       | 23/01/2019                                                                                  |                                                        | Relinquished | Kory Auch / <i>[Signature]</i> |  | Date/Time: | 23/01/2019 @ 12:45 |  |  |  |                                                                                                                                                                      |  |                                                             |
| Received by:                                                |                                            |                                               | Date/Time:                                                                       |                                                                                             |                                                        | Relinquished |                                |  | Date/Time: |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| Received by Courier:                                        |                                            |                                               | Date/Time:                                                                       |                                                                                             |                                                        | Relinquished |                                |  | Date/Time: |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| Received by Lab:                                            | Alice (ALS)                                |                                               | Date/Time:                                                                       | 23/1/19 12:50                                                                               |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |
| Remarks:                                                    | Please CC reports to GHD Lab Reports email |                                               |                                                                                  |                                                                                             |                                                        |              |                                |  |            |                    |  |  |  |                                                                                                                                                                      |  |                                                             |

**GHD**



**GHD Melbourne**  
180 Lonsdale Street, Melbourne 3000  
Telephone: 613 8687 6000 Facsimile: 613 8687 8111

|                                                             |  |                                               |  |                                          |  |                                                                                                                                                                      |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
|-------------------------------------------------------------|--|-----------------------------------------------|--|------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------|--|----------------------|--|--------------------------------------------------------|--|-------------------------------------|--|---------------------------------|--|-----------------------------|--|--|--|--|--|--|--|--|--|------------------------------------------|--|------|--|---------|--|
| Job Number<br>3136558                                       |  | GHD Office<br>Melbourne                       |  | Laboratory:<br>ALS Springvale            |  | PLEASE NOTE:<br><br>- E-mail results to the GHD Contact with the GHD Job Number in the e-mail subject line.<br><br>Results to be provided in ESDAT compatible format |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Project<br>Wonthaggi PSP - Targeted Intrusive Investigation |  |                                               |  | Address:<br>2 - 4 Westall Rd, Springvale |  |                                                                                                                                                                      |  |                                                                                            |  |                      |  |                                                        |  |                                     |  | Lab Contact:<br>Shirley LeCornu |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| GHD Contact<br>Kory Auch                                    |  | Contact Email<br>kory.auch@ghd.com            |  |                                          |  |                                                                                                                                                                      |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Standard TAT                                                |  | Quote No./GHD Reference<br>EN/005/18 (Vic BQ) |  |                                          |  |                                                                                                                                                                      |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Sample ID                                                   |  | Date                                          |  | Time                                     |  | Sample Matrix:<br>S: Soil<br>SL: Sludge<br>W: Water<br>GW: Groundwater                                                                                               |  | Container Type<br>J: soil jar<br>B: bag<br>V: vial<br>G: glass bottle<br>P: plastic bottle |  | IWRG621 suite (P-16) |  | TRH (C6-C40) / BTEXN / PAH / Phenols / OC / OP / PCB / |  | Asbestos (presense/absense) (EA200) |  | TRH (C10-C40) (Silica Gel)      |  | TRH (C6-C10) / BTEXN (W-18) |  |  |  |  |  |  |  |  |  | Send to Eurofins for equivalent analysis |  | HOLD |  | Remarks |  |
| FD01                                                        |  | 36                                            |  | 22 / Jan / 2019                          |  | 09:00                                                                                                                                                                |  | S                                                                                          |  | J                    |  | X                                                      |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| FD02                                                        |  | 37                                            |  | 22 / Jan / 2019                          |  | 10:30                                                                                                                                                                |  | S                                                                                          |  | J                    |  | X                                                      |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| FD03                                                        |  | 38                                            |  | 23 / Jan / 2019                          |  | 10:30                                                                                                                                                                |  | S                                                                                          |  | J                    |  | X                                                      |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| FD04                                                        |  |                                               |  | 22 / Jan / 2019                          |  | 09:00                                                                                                                                                                |  | S                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| FS01                                                        |  | —                                             |  | 22 / Jan / 2019                          |  | 09:00                                                                                                                                                                |  | S                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| FS02                                                        |  | —                                             |  | 22 / Jan / 2019                          |  | 10:30                                                                                                                                                                |  | S                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| FS03                                                        |  | —                                             |  | 23 / Jan / 2019                          |  | 10:30                                                                                                                                                                |  | S                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| FS04                                                        |  | —                                             |  | 23 / Jan / 2019                          |  | 10:30                                                                                                                                                                |  | S                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| TB01                                                        |  | 39                                            |  | 22 / Jan / 2019                          |  | 12:00                                                                                                                                                                |  | W                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| TB02                                                        |  | 40                                            |  | 23 / Jan / 2019                          |  | 12:00                                                                                                                                                                |  | W                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| TB03                                                        |  |                                               |  | 23 / Jan / 2019                          |  | 12:00                                                                                                                                                                |  | W                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| TB04                                                        |  |                                               |  | 23 / Jan / 2019                          |  | 12:00                                                                                                                                                                |  | W                                                                                          |  | J                    |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Extra sample:                                               |  | BN 24/1                                       |  | 22/1/19                                  |  | 1X sheet material                                                                                                                                                    |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| TP04 - 0.5 (ACM) sheet                                      |  |                                               |  |                                          |  |                                                                                                                                                                      |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Sampled by:                                                 |  | Kory Auch / 7/5                               |  | Date/Time:                               |  | 23/01/2019                                                                                                                                                           |  | Relinquished                                                                               |  | Kory Auch / 7/5      |  | Date/Time:                                             |  | 23/01/2019 @ 12:45                  |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Received by:                                                |  |                                               |  | Date/Time:                               |  |                                                                                                                                                                      |  | Relinquished                                                                               |  |                      |  | Date/Time:                                             |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Received by Courier:                                        |  |                                               |  | Date/Time:                               |  |                                                                                                                                                                      |  | Relinquished                                                                               |  |                      |  | Date/Time:                                             |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Received by Lab:                                            |  | Alice (ACS)                                   |  | Date/Time:                               |  | 23/1/19 12:50                                                                                                                                                        |  | Relinquished                                                                               |  |                      |  | Date/Time:                                             |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |
| Remarks:                                                    |  | Please CC reports to GHD Lab Reports email    |  |                                          |  |                                                                                                                                                                      |  |                                                                                            |  |                      |  |                                                        |  |                                     |  |                                 |  |                             |  |  |  |  |  |  |  |  |  |                                          |  |      |  |         |  |

## QUALITY CONTROL REPORT

**Work Order** : **EM1900929**

**Page** : 1 of 23

**Client** : **GHD PTY LTD**

**Contact** : **KORY AUCH**

**Address** : **LEVEL 8, 180 LONSDALE ST  
MELBOURNE VIC, AUSTRALIA 3001**

**Telephone** : ----

**Project** : **3136558**

**Order number** :

**C-O-C number** : ----

**Sampler** : **KA**

**Site** : **Wonthaggi PSP - Targeted Intrusive Investigation**

**Quote number** : **EN/005/18**

**No. of samples received** : **41**

**No. of samples analysed** : **23**

**Laboratory** : **Environmental Division Melbourne**

**Contact** : **Shirley LeCornu**

**Address** : **4 Westall Rd Springvale VIC Australia 3171**

**Telephone** : **+6138549 9630**

**Date Samples Received** : **23-Jan-2019**

**Date Analysis Commenced** : **24-Jan-2019**

**Issue Date** : **01-Feb-2019**



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                |
|---------------------|-------------------------------------|---------------------------------------|
| Arenie Vijayaratnam | Non-metals prep supervisor          | Melbourne Inorganics, Springvale, VIC |
| Dilani Fernando     | Senior Inorganic Chemist            | Melbourne Inorganics, Springvale, VIC |
| Nikki Stepniewski   | Senior Inorganic Instrument Chemist | Melbourne Inorganics, Springvale, VIC |
| Vanessa Phung       | Approved Asbestos Identifier        | Melbourne Asbestos, Springvale, VIC   |
| Xing Lin            | Senior Organic Chemist              | Melbourne Organics, Springvale, VIC   |





## 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 (%) |
| <b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 2156250)</b>  |                  |                                |            |                                   |         |                 |                  |         |                     |
| EM1900814-001                                                        | Anonymous        | EA001: pH (CaCl <sub>2</sub> ) | ----       | 0.1                               | pH Unit | 7.7             | 7.9              | 2.56    | 0% - 20%            |
| EM1900894-002                                                        | Anonymous        | EA001: pH (CaCl <sub>2</sub> ) | ----       | 0.1                               | pH Unit | 7.5             | 7.6              | 1.32    | 0% - 20%            |
| <b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 2156251)</b>  |                  |                                |            |                                   |         |                 |                  |         |                     |
| EM1900929-031                                                        | CS04             | EA001: pH (CaCl <sub>2</sub> ) | ----       | 0.1                               | pH Unit | 5.3             | 5.1              | 3.85    | 0% - 20%            |
| EM1900998-015                                                        | Anonymous        | EA001: pH (CaCl <sub>2</sub> ) | ----       | 0.1                               | pH Unit | 6.5             | 6.4              | 1.55    | 0% - 20%            |
| <b>EA001: pH in soil using 0.01M CaCl extract (QC Lot: 2156858)</b>  |                  |                                |            |                                   |         |                 |                  |         |                     |
| EM1900857-003                                                        | Anonymous        | EA001: pH (CaCl <sub>2</sub> ) | ----       | 0.1                               | pH Unit | 6.7             | 6.6              | 1.50    | 0% - 20%            |
| EM1900963-004                                                        | Anonymous        | EA001: pH (CaCl <sub>2</sub> ) | ----       | 0.1                               | pH Unit | 7.2             | 7.2              | 0.00    | 0% - 20%            |
| <b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2153824)</b> |                  |                                |            |                                   |         |                 |                  |         |                     |
| EM1900927-018                                                        | Anonymous        | EA055: Moisture Content        | ----       | 0.1                               | %       | 17.3            | 16.5             | 4.54    | 0% - 50%            |
| EM1900929-003                                                        | TP02_0.1         | EA055: Moisture Content        | ----       | 0.1                               | %       | 15.1            | 15.4             | 1.95    | 0% - 50%            |
| <b>EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2153825)</b> |                  |                                |            |                                   |         |                 |                  |         |                     |
| EM1900929-029                                                        | CS02             | EA055: Moisture Content        | ----       | 0.1                               | %       | 17.5            | 16.0             | 9.11    | 0% - 50%            |
| <b>EG005T: Total Metals by ICP-AES (QC Lot: 2156301)</b>             |                  |                                |            |                                   |         |                 |                  |         |                     |
| EM1900814-021                                                        | Anonymous        | EG005T: Cadmium                | 7440-43-9  | 1                                 | mg/kg   | <1              | <1               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Molybdenum             | 7439-98-7  | 2                                 | mg/kg   | <2              | <2               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Nickel                 | 7440-02-0  | 2                                 | mg/kg   | 14              | 12               | 14.9    | No Limit            |
|                                                                      |                  | EG005T: Silver                 | 7440-22-4  | 2                                 | mg/kg   | <2              | <2               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Arsenic                | 7440-38-2  | 5                                 | mg/kg   | 23              | 19               | 19.3    | No Limit            |
|                                                                      |                  | EG005T: Copper                 | 7440-50-8  | 5                                 | mg/kg   | 6               | 6                | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Lead                   | 7439-92-1  | 5                                 | mg/kg   | 22              | 18               | 22.5    | No Limit            |
|                                                                      |                  | EG005T: Selenium               | 7782-49-2  | 5                                 | mg/kg   | <5              | <5               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Tin                    | 7440-31-5  | 5                                 | mg/kg   | <5              | <5               | 0.00    | No Limit            |
|                                                                      |                  | EG005T: Zinc                   | 7440-66-6  | 5                                 | mg/kg   | 8               | 7                | 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 (%) |
| EG005T: Total Metals by ICP-AES (QC Lot: 2156301) - continued  |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900929-012                                                  | TP05_0.1         | EG005T: Cadmium                           | 7440-43-9  | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                |                  | EG005T: Molybdenum                        | 7439-98-7  | 2                                 | mg/kg | <2              | <2               | 0.00    | No Limit            |
|                                                                |                  | EG005T: Nickel                            | 7440-02-0  | 2                                 | mg/kg | 47              | 43               | 8.13    | 0% - 20%            |
|                                                                |                  | EG005T: Silver                            | 7440-22-4  | 2                                 | mg/kg | <2              | <2               | 0.00    | No Limit            |
|                                                                |                  | EG005T: Arsenic                           | 7440-38-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                |                  | EG005T: Copper                            | 7440-50-8  | 5                                 | mg/kg | 28              | 26               | 6.42    | No Limit            |
|                                                                |                  | EG005T: Lead                              | 7439-92-1  | 5                                 | mg/kg | 72              | 85               | 16.2    | 0% - 50%            |
|                                                                |                  | EG005T: Selenium                          | 7782-49-2  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                |                  | EG005T: Tin                               | 7440-31-5  | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
| EG005T: Zinc                                                   | 7440-66-6        | 5                                         | mg/kg      | 126                               | 135   | 7.07            | 0% - 20%         |         |                     |
| EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2156302)    |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900814-021                                                  | Anonymous        | EG035T: Mercury                           | 7439-97-6  | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EM1900929-012                                                  | TP05_0.1         | EG035T: Mercury                           | 7439-97-6  | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 2156866) |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                  | Anonymous        | EG048G: Hexavalent Chromium               | 18540-29-9 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| EM1900912-001                                                  | Anonymous        | EG048G: Hexavalent Chromium               | 18540-29-9 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 2156867) |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900929-012                                                  | TP05_0.1         | EG048G: Hexavalent Chromium               | 18540-29-9 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| EM1900984-001                                                  | Anonymous        | EG048G: Hexavalent Chromium               | 18540-29-9 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 2158786) |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900810-036                                                  | Anonymous        | EK026SF: Total Cyanide                    | 57-12-5    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EM1900894-001                                                  | Anonymous        | EK026SF: Total Cyanide                    | 57-12-5    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EK026SF: Total CN by Segmented Flow Analyser (QC Lot: 2158787) |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900929-029                                                  | CS02             | EK026SF: Total Cyanide                    | 57-12-5    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EM1900984-004                                                  | Anonymous        | EK026SF: Total Cyanide                    | 57-12-5    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EK040T: Fluoride Total (QC Lot: 2156069)                       |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900814-014                                                  | Anonymous        | EK040T: Fluoride                          | 16984-48-8 | 40                                | mg/kg | 880             | 800              | 10.0    | 0% - 20%            |
| EM1900895-003                                                  | Anonymous        | EK040T: Fluoride                          | 16984-48-8 | 40                                | mg/kg | 110             | 100              | 0.00    | No Limit            |
| EK040T: Fluoride Total (QC Lot: 2156070)                       |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900929-012                                                  | TP05_0.1         | EK040T: Fluoride                          | 16984-48-8 | 40                                | mg/kg | 180             | 210              | 14.6    | No Limit            |
| EM1900963-002                                                  | Anonymous        | EK040T: Fluoride                          | 16984-48-8 | 40                                | mg/kg | 220             | 190              | 11.8    | No Limit            |
| EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 2154979)       |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                  | Anonymous        | EP066-EM: Total Polychlorinated biphenyls | ----       | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EM1900929-009                                                  | TP04_0.2         | EP066-EM: Total Polychlorinated biphenyls | ----       | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 2157002)       |                  |                                           |            |                                   |       |                 |                  |         |                     |
| EM1900927-002                                                  | Anonymous        | EP066: Total Polychlorinated biphenyls    | ----       | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EM1900929-032                                                  | CS05             | EP066: Total Polychlorinated biphenyls    | ----       | 0.1                               | mg/kg | <0.1            | <0.1             | 0.00    | No Limit            |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 2157005)       |                  |                                           |            |                                   |       |                 |                  |         |                     |



| Sub-Matrix: SOIL                                                     |                  |                                |            | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|----------------------------------------------------------------------|------------------|--------------------------------|------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                                 | Client sample ID | Method: Compound               | CAS Number | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 2157005) - continued |                  |                                |            |                                   |       |                 |                  |         |                     |
| EM1900927-002                                                        | Anonymous        | EP068: alpha-BHC               | 319-84-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Hexachlorobenzene (HCB) | 118-74-1   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-BHC                | 319-85-7   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: gamma-BHC               | 58-89-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: delta-BHC               | 319-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor              | 76-44-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Aldrin                  | 309-00-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor epoxide      | 1024-57-3  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: trans-Chlordane         | 5103-74-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: alpha-Endosulfan        | 959-98-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: cis-Chlordane           | 5103-71-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dieldrin                | 60-57-1    | 0.05                              | mg/kg | 0.14            | 0.14             | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4'-DDE                | 72-55-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin                  | 72-20-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-Endosulfan         | 33213-65-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4'-DDD                | 72-54-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin aldehyde         | 7421-93-4  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endosulfan sulfate      | 1031-07-8  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin ketone           | 53494-70-5 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4'-DDT                | 50-29-3    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Methoxychlor            | 72-43-5    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EM1900929-032                                                        | CS05             | EP068: alpha-BHC               | 319-84-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Hexachlorobenzene (HCB) | 118-74-1   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-BHC                | 319-85-7   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: gamma-BHC               | 58-89-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: delta-BHC               | 319-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor              | 76-44-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Aldrin                  | 309-00-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Heptachlor epoxide      | 1024-57-3  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: trans-Chlordane         | 5103-74-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: alpha-Endosulfan        | 959-98-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: cis-Chlordane           | 5103-71-9  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dieldrin                | 60-57-1    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4'-DDE                | 72-55-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin                  | 72-20-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: beta-Endosulfan         | 33213-65-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: 4,4'-DDD                | 72-54-8    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin aldehyde         | 7421-93-4  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endosulfan sulfate      | 1031-07-8  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Endrin ketone           | 53494-70-5 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |



| Sub-Matrix: SOIL                                                     |                  |                            |            | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|----------------------------------------------------------------------|------------------|----------------------------|------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                                                 | Client sample ID | Method: Compound           | CAS Number | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP068A: Organochlorine Pesticides (OC) (QC Lot: 2157005) - continued |                  |                            |            |                                   |       |                 |                  |         |                     |
| EM1900929-032                                                        | CS05             | EP068: 4,4'-DDT            | 50-29-3    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Methoxychlor        | 72-43-5    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2157005)           |                  |                            |            |                                   |       |                 |                  |         |                     |
| EM1900927-002                                                        | Anonymous        | EP068: Dichlorvos          | 62-73-7    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Demeton-S-methyl    | 919-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dimethoate          | 60-51-5    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Diazinon            | 333-41-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos-methyl | 5598-13-0  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Malathion           | 121-75-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenthion            | 55-38-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos        | 2921-88-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Pirimphos-ethyl     | 23505-41-1 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorfenvinphos     | 470-90-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Bromophos-ethyl     | 4824-78-6  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenamiphos          | 22224-92-6 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Prothiofos          | 34643-46-4 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Ethion              | 563-12-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Carbophenothion     | 786-19-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Azinphos Methyl     | 86-50-0    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Monocrotophos       | 6923-22-4  | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Parathion-methyl    | 298-00-0   | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Parathion           | 56-38-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
| EM1900929-032                                                        | CS05             | EP068: Dichlorvos          | 62-73-7    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Demeton-S-methyl    | 919-86-8   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Dimethoate          | 60-51-5    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Diazinon            | 333-41-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos-methyl | 5598-13-0  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Malathion           | 121-75-5   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenthion            | 55-38-9    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorpyrifos        | 2921-88-2  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Pirimphos-ethyl     | 23505-41-1 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Chlorfenvinphos     | 470-90-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Bromophos-ethyl     | 4824-78-6  | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Fenamiphos          | 22224-92-6 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Prothiofos          | 34643-46-4 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Ethion              | 563-12-2   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Carbophenothion     | 786-19-6   | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Azinphos Methyl     | 86-50-0    | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                      |                  | EP068: Monocrotophos       | 6923-22-4  | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                      |                  | EP068: Parathion-methyl    | 298-00-0   | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |





| Sub-Matrix: SOIL                                                       |                  |                                                   |            | Laboratory Duplicate (DUP) Report |         |                 |                  |         |                     |      |          |
|------------------------------------------------------------------------|------------------|---------------------------------------------------|------------|-----------------------------------|---------|-----------------|------------------|---------|---------------------|------|----------|
| Laboratory sample ID                                                   | Client sample ID | Method: Compound                                  | CAS Number | LOR                               | Unit    | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |      |          |
| EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2157005) - continued |                  |                                                   |            |                                   |         |                 |                  |         |                     |      |          |
| EM1900929-032                                                          | CS05             | EP068: Parathion                                  | 56-38-2    | 0.2                               | mg/kg   | <0.2            | <0.2             | 0.00    | No Limit            |      |          |
| EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2152801)             |                  |                                                   |            |                                   |         |                 |                  |         |                     |      |          |
| EM1900929-009                                                          | TP04_0.2         | EP074-UT: Benzene                                 | 71-43-2    | 0.2                               | mg/kg   | <0.2            | <0.2             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Toluene                                 | 108-88-3   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Ethylbenzene                            | 100-41-4   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: meta- & para-Xylene                     | 108-38-3   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  |                                                   | 106-42-3   |                                   |         |                 |                  |         |                     |      |          |
|                                                                        |                  | EP074-UT: Styrene                                 | 100-42-5   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: ortho-Xylene                            | 95-47-6    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
| EP074H: Naphthalene (QC Lot: 2152801)                                  |                  |                                                   |            |                                   |         |                 |                  |         |                     |      |          |
| EM1900929-009                                                          | TP04_0.2         | EP074-UT: Naphthalene                             | 91-20-3    | 1                                 | mg/kg   | <1              | <1               | 0.00    | No Limit            |      |          |
| EP074I: Volatile Halogenated Compounds (QC Lot: 2152801)               |                  |                                                   |            |                                   |         |                 |                  |         |                     |      |          |
| EM1900929-009                                                          | TP04_0.2         | EP074-UT: 1.1-Dichloroethene                      | 75-35-4    | 0.01                              | mg/kg   | <0.01           | <0.01            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: cis-1.2-Dichloroethene                  | 156-59-2   | 0.01                              | mg/kg   | <0.01           | <0.01            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.1.1-Trichloroethane                   | 71-55-6    | 0.01                              | mg/kg   | <0.01           | <0.01            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Carbon Tetrachloride                    | 56-23-5    | 0.01                              | mg/kg   | <0.01           | <0.01            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.1.1.2-Tetrachloroethane               | 630-20-6   | 0.01                              | mg/kg   | <0.01           | <0.01            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.2.4-Trichlorobenzene                  | 120-82-1   | 0.01                              | mg/kg   | <0.01           | <0.01            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Vinyl chloride                          | 75-01-4    | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: trans-1.2-Dichloroethene                | 156-60-5   | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Chloroform                              | 67-66-3    | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.2-Dichloroethane                      | 107-06-2   | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Trichloroethene                         | 79-01-6    | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Tetrachloroethene                       | 127-18-4   | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.1.2.2-Tetrachloroethane               | 79-34-5    | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Hexachlorobutadiene                     | 87-68-3    | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: Chlorobenzene                           | 108-90-7   | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.4-Dichlorobenzene                     | 106-46-7   | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.2-Dichlorobenzene                     | 95-50-1    | 0.02                              | mg/kg   | <0.02           | <0.02            | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP074-UT: 1.1.2-Trichloroethane                   | 79-00-5    | 0.04                              | mg/kg   | <0.04           | <0.04            | 0.00    | No Limit            |      |          |
|                                                                        |                  |                                                   |            | EP074-UT: Methylene chloride      | 75-09-2 | 0.4             | mg/kg            | <0.4    | <0.4                | 0.00 | No Limit |
|                                                                        |                  | EP075(SIM)A: Phenolic Compounds (QC Lot: 2157004) |            |                                   |         |                 |                  |         |                     |      |          |
| EM1900927-002                                                          | Anonymous        | EP075(SIM): Phenol                                | 108-95-2   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP075(SIM): 2-Chlorophenol                        | 95-57-8    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP075(SIM): 2-Methylphenol                        | 95-48-7    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP075(SIM): 2-Nitrophenol                         | 88-75-5    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP075(SIM): 2.4-Dimethylphenol                    | 105-67-9   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP075(SIM): 2.4-Dichlorophenol                    | 120-83-2   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                                        |                  | EP075(SIM): 2.6-Dichlorophenol                    | 87-65-0    | 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)A: Phenolic Compounds (QC Lot: 2157004) - continued |                  |                                                                  |            |                                   |         |                 |                  |         |                     |      |          |
| EM1900927-002                                                 | Anonymous        | EP075(SIM): 4-Chloro-3-methylphenol                              | 59-50-7    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2,4,6-Trichlorophenol                                | 88-06-2    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2,4,5-Trichlorophenol                                | 95-95-4    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 3- & 4-Methylphenol                                  | 1319-77-3  | 1                                 | mg/kg   | <1              | <1               | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): Pentachlorophenol                                    | 87-86-5    | 2                                 | mg/kg   | <2              | <2               | 0.00    | No Limit            |      |          |
| EM1900929-032                                                 | CS05             | EP075(SIM): Phenol                                               | 108-95-2   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2-Chlorophenol                                       | 95-57-8    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2-Methylphenol                                       | 95-48-7    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2-Nitrophenol                                        | 88-75-5    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2,4-Dimethylphenol                                   | 105-67-9   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2,4-Dichlorophenol                                   | 120-83-2   | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2,6-Dichlorophenol                                   | 87-65-0    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 4-Chloro-3-methylphenol                              | 59-50-7    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2,4,6-Trichlorophenol                                | 88-06-2    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 2,4,5-Trichlorophenol                                | 95-95-4    | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): 3- & 4-Methylphenol                                  | 1319-77-3  | 1                                 | mg/kg   | <1              | <1               | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM): Pentachlorophenol                                    | 87-86-5    | 2                                 | mg/kg   | <2              | <2               | 0.00    | No Limit            |      |          |
|                                                               |                  | EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2157004) |            |                                   |         |                 |                  |         |                     |      |          |
|                                                               |                  | EM1900927-002                                                    | 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         |                                                                  |            | 0.5                               | mg/kg   | <0.5            | <0.5             | 0.00    | No Limit            |      |          |
|                                                               | 205-82-3         |                                                                  |            |                                   |         |                 |                  |         |                     |      |          |
| 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            |      |          |
| EM1900929-032                                                 | CS05             | 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            |      |          |



| 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: 2157004) - continued |                  |                                               |                |                                   |       |                 |                  |         |                     |
| EM1900929-032                                                                | CS05             | 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       | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                              |                  |                                               | 205-82-3       |                                   |       |                 |                  |         |                     |
|                                                                              |                  | 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            |
| EP075A: Phenolic Compounds (Halogenated) (QC Lot: 2154977)                   |                  |                                               |                |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                                | Anonymous        | EP075-EM: 2-Chlorophenol                      | 95-57-8        | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4-Dichlorophenol                  | 120-83-2       | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,6-Dichlorophenol                  | 87-65-0        | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 4-Chloro-3-methylphenol             | 59-50-7        | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,3,5,6-Tetrachlorophenol           | 935-95-5       | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4,5-Trichlorophenol               | 95-95-4        | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4,6-Trichlorophenol               | 88-06-2        | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol | 4901-51-3/58-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                              |                  |                                               | 0-2            |                                   |       |                 |                  |         |                     |
| EP075-EM: Pentachlorophenol                                                  | 87-86-5          | 0.2                                           | mg/kg          | <0.2                              | <0.2  | 0.00            | No Limit         |         |                     |
| EM1900929-009                                                                | TP04_0.2         | EP075-EM: 2-Chlorophenol                      | 95-57-8        | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4-Dichlorophenol                  | 120-83-2       | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,6-Dichlorophenol                  | 87-65-0        | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 4-Chloro-3-methylphenol             | 59-50-7        | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,3,5,6-Tetrachlorophenol           | 935-95-5       | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4,5-Trichlorophenol               | 95-95-4        | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4,6-Trichlorophenol               | 88-06-2        | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol | 4901-51-3/58-9 | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                              |                  |                                               | 0-2            |                                   |       |                 |                  |         |                     |
| EP075-EM: Pentachlorophenol                                                  | 87-86-5          | 0.2                                           | mg/kg          | <0.2                              | <0.2  | 0.00            | No Limit         |         |                     |
| EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 2154977)               |                  |                                               |                |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                                | Anonymous        | EP075-EM: Phenol                              | 108-95-2       | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2-Methylphenol                      | 95-48-7        | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 3- & 4-Methylphenol                 | 1319-77-3      | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2-Nitrophenol                       | 88-75-5        | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4-Dimethylphenol                  | 105-67-9       | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                              |                  | EP075-EM: 2,4-Dinitrophenol                   | 51-28-5        | 5                                 | mg/kg | <5              | <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 (%) |
| EP075A: Phenolic Compounds (Non-halogenated) (QC Lot: 2154977) - continued |                  |                                                             |                      |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                              | Anonymous        | EP075-EM: 4-Nitrophenol                                     | 100-02-7             | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2-Methyl-4.6-dinitrophenol                        | 8071-51-0            | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Dinoseb                                           | 88-85-7              | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol                    | 131-89-5             | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
| EM1900929-009                                                              | TP04_0.2         | EP075-EM: Phenol                                            | 108-95-2             | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2-Methylphenol                                    | 95-48-7              | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 3- & 4-Methylphenol                               | 1319-77-3            | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2-Nitrophenol                                     | 88-75-5              | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2.4-Dimethylphenol                                | 105-67-9             | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2.4-Dinitrophenol                                 | 51-28-5              | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 4-Nitrophenol                                     | 100-02-7             | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2-Methyl-4.6-dinitrophenol                        | 8071-51-0            | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Dinoseb                                           | 88-85-7              | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: 2-Cyclohexyl-4.6-Dinitrophenol                    | 131-89-5             | 5                                 | mg/kg | <5              | <5               | 0.00    | No Limit            |
|                                                                            |                  | EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2154977) |                      |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                              | Anonymous        | EP075-EM: Naphthalene                                       | 91-20-3              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Acenaphthene                                      | 83-32-9              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Acenaphthylene                                    | 208-96-8             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Fluorene                                          | 86-73-7              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Phenanthrene                                      | 85-01-8              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Anthracene                                        | 120-12-7             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Fluoranthene                                      | 206-44-0             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Pyrene                                            | 129-00-0             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Benz(a)anthracene                                 | 56-55-3              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Chrysene                                          | 218-01-9             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene                 | 205-99-2<br>207-08-9 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Benzo(a)pyrene                                    | 50-32-8              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Indeno(1.2.3.cd)pyrene                            | 193-39-5             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Dibenz(a,h)anthracene                             | 53-70-3              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Benzo(g,h,i)perylene                              | 191-24-2             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| EM1900929-009                                                              | TP04_0.2         | EP075-EM: Naphthalene                                       | 91-20-3              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Acenaphthene                                      | 83-32-9              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Acenaphthylene                                    | 208-96-8             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Fluorene                                          | 86-73-7              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Phenanthrene                                      | 85-01-8              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Anthracene                                        | 120-12-7             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Fluoranthene                                      | 206-44-0             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Pyrene                                            | 129-00-0             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                            |                  | EP075-EM: Benz(a)anthracene                                 | 56-55-3              | 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 (%) |
| EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2154977) - continued |                  |                                             |                      |                                   |       |                 |                  |         |                     |
| EM1900929-009                                                           | TP04_0.2         | EP075-EM: Chrysene                          | 218-01-9             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene | 205-99-2<br>207-08-9 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Benzo(a)pyrene                    | 50-32-8              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Indeno(1.2.3.cd)pyrene            | 193-39-5             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Dibenz(a.h)anthracene             | 53-70-3              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Benzo(g.h.i)perylene              | 191-24-2             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
| EP075I: Organochlorine Pesticides (QC Lot: 2154977)                     |                  |                                             |                      |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                           | Anonymous        | EP075-EM: alpha-BHC                         | 319-84-6             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Hexachlorobenzene (HCB)           | 118-74-1             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: beta-BHC                          | 319-85-7             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: gamma-BHC                         | 58-89-9              | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: delta-BHC                         | 319-86-8             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Heptachlor                        | 76-44-8              | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Aldrin                            | 309-00-2             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Heptachlor epoxide                | 1024-57-3            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: cis-Chlordane                     | 5103-71-9            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: trans-Chlordane                   | 5103-74-2            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Endosulfan 1                      | 959-98-8             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Dieldrin                          | 60-57-1              | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Endrin aldehyde                   | 7421-93-4            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Endrin                            | 72-20-8              | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Endosulfan 2                      | 33213-65-9           | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Endosulfan sulfate                | 1031-07-8            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Methoxychlor                      | 72-43-5              | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: 4,4`-DDE                          | 72-55-9              | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: 4,4`-DDD                          | 72-54-8              | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: 4,4`-DDT                          | 50-29-3              | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EM1900929-009                                                           | TP04_0.2         | EP075-EM: alpha-BHC                         | 319-84-6             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Hexachlorobenzene (HCB)           | 118-74-1             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: beta-BHC                          | 319-85-7             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: gamma-BHC                         | 58-89-9              | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: delta-BHC                         | 319-86-8             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Heptachlor                        | 76-44-8              | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Aldrin                            | 309-00-2             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Heptachlor epoxide                | 1024-57-3            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: cis-Chlordane                     | 5103-71-9            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: trans-Chlordane                   | 5103-74-2            | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Endosulfan 1                      | 959-98-8             | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                         |                  | EP075-EM: Dieldrin                          | 60-57-1              | 0.03                              | mg/kg | <0.03           | <0.03            | 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 (%) |
| EP075I: Organochlorine Pesticides (QC Lot: 2154977) - continued                   |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900929-009                                                                     | TP04_0.2         | EP075-EM: Endrin aldehyde                   | 7421-93-4   | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                                   |                  | EP075-EM: Endrin                            | 72-20-8     | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                                   |                  | EP075-EM: Endosulfan 2                      | 33213-65-9  | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                                   |                  | EP075-EM: Endosulfan sulfate                | 1031-07-8   | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                                   |                  | EP075-EM: Methoxychlor                      | 72-43-5     | 0.03                              | mg/kg | <0.03           | <0.03            | 0.00    | No Limit            |
|                                                                                   |                  | EP075-EM: 4.4`-DDE                          | 72-55-9     | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                   |                  | EP075-EM: 4.4`-DDD                          | 72-54-8     | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
|                                                                                   |                  | EP075-EM: 4.4`-DDT                          | 50-29-3     | 0.05                              | mg/kg | <0.05           | <0.05            | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2152801)                         |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900929-009                                                                     | TP04_0.2         | EP074-UT: C6 - C9 Fraction                  | ----        | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2153485)                         |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900816-002                                                                     | Anonymous        | EP080: C6 - C9 Fraction                     | ----        | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1900929-006                                                                     | TP03_0.1         | EP080: C6 - C9 Fraction                     | ----        | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2154978)                         |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                                     | Anonymous        | EP071-EM: C15 - C28 Fraction                | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071-EM: C29 - C36 Fraction                | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071-EM: C10 - C14 Fraction                | ----        | 50                                | mg/kg | 70              | 60               | 0.00    | No Limit            |
| EM1900929-009                                                                     | TP04_0.2         | EP071-EM: C15 - C28 Fraction                | ----        | 100                               | mg/kg | 110             | 100              | 9.88    | No Limit            |
|                                                                                   |                  | EP071-EM: C29 - C36 Fraction                | ----        | 100                               | mg/kg | 160             | 150              | 10.7    | No Limit            |
|                                                                                   |                  | EP071-EM: C10 - C14 Fraction                | ----        | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2157003)                         |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900927-002                                                                     | Anonymous        | EP071: C15 - C28 Fraction                   | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction                   | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction                   | ----        | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C36 Fraction (sum)             | ----        | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EM1900929-032                                                                     | CS05             | EP071: C15 - C28 Fraction                   | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction                   | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction                   | ----        | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C36 Fraction (sum)             | ----        | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2152801) |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900929-009                                                                     | TP04_0.2         | EP074-UT: C6 - C10 Fraction                 | C6_C10      | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
|                                                                                   |                  | EP074-UT: C6 - C10 Fraction minus BTEX (F1) | C6_C10-BTEX | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2153485) |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900816-002                                                                     | Anonymous        | EP080: C6 - C10 Fraction                    | C6_C10      | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1900929-006                                                                     | TP03_0.1         | EP080: C6 - C10 Fraction                    | C6_C10      | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2154978) |                  |                                             |             |                                   |       |                 |                  |         |                     |
| EM1900810-001                                                                     | Anonymous        | EP071-EM: >C16 - C34 Fraction               | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071-EM: >C34 - C40 Fraction               | ----        | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071-EM: >C10 - C16 Fraction               | ----        | 50                                | mg/kg | 60              | 60               | 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 (%) |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2154978) - continued |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1900929-009                                                                                 | TP04_0.2         | EP071-EM: >C16 - C34 Fraction    | ----                 | 100                               | mg/kg | 240             | 210              | 9.86    | No Limit            |
|                                                                                               |                  | EP071-EM: >C34 - C40 Fraction    | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071-EM: >C10 - C16 Fraction    | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2157003)             |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1900927-002                                                                                 | Anonymous        | EP071: >C16 - C34 Fraction       | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C34 - C40 Fraction       | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C16 Fraction       | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C40 Fraction (sum) | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EM1900929-032                                                                                 | CS05             | EP071: >C16 - C34 Fraction       | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C34 - C40 Fraction       | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C16 Fraction       | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                               |                  | EP071: >C10 - C40 Fraction (sum) | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EP080: BTEXN (QC Lot: 2153485)                                                                |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1900816-002                                                                                 | Anonymous        | EP080: Benzene                   | 71-43-2              | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Toluene                   | 108-88-3             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Ethylbenzene              | 100-41-4             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: meta- & para-Xylene       | 108-38-3<br>106-42-3 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: ortho-Xylene              | 95-47-6              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Naphthalene               | 91-20-3              | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EM1900929-006                                                                                 | TP03_0.1         | EP080: Benzene                   | 71-43-2              | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Toluene                   | 108-88-3             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Ethylbenzene              | 100-41-4             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: meta- & para-Xylene       | 108-38-3<br>106-42-3 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: ortho-Xylene              | 95-47-6              | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Naphthalene               | 91-20-3              | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| Sub-Matrix: WATER                                                                             |                  |                                  |                      | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
| Laboratory sample ID                                                                          | Client sample ID | Method: Compound                 | CAS Number           | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2158116)                                     |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1900931-002                                                                                 | Anonymous        | EP080: C6 - C9 Fraction          | ----                 | 20                                | µg/L  | <20             | <20              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2158116)             |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1900931-002                                                                                 | Anonymous        | EP080: C6 - C10 Fraction         | C6_C10               | 20                                | µg/L  | <20             | <20              | 0.00    | No Limit            |
| EP080: BTEXN (QC Lot: 2158116)                                                                |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1900931-002                                                                                 | Anonymous        | EP080: Benzene                   | 71-43-2              | 1                                 | µg/L  | <1              | <1               | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Toluene                   | 108-88-3             | 2                                 | µg/L  | <2              | <2               | 0.00    | No Limit            |
|                                                                                               |                  | EP080: Ethylbenzene              | 100-41-4             | 2                                 | µg/L  | <2              | <2               | 0.00    | No Limit            |
|                                                                                               |                  | EP080: meta- & para-Xylene       | 108-38-3<br>106-42-3 | 2                                 | µg/L  | <2              | <2               | 0.00    | No Limit            |



Sub-Matrix: **WATER**

|                                            |                  |                     |            | Laboratory Duplicate (DUP) Report |      |                 |                  |         |                     |
|--------------------------------------------|------------------|---------------------|------------|-----------------------------------|------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                       | Client sample ID | Method: Compound    | CAS Number | LOR                               | Unit | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| EP080: BTEXN (QC Lot: 2158116) - continued |                  |                     |            |                                   |      |                 |                  |         |                     |
| EM1900931-002                              | Anonymous        | EP080: ortho-Xylene | 95-47-6    | 2                                 | µg/L | <2              | <2               | 0.00    | No Limit            |
|                                            |                  | EP080: Naphthalene  | 91-20-3    | 5                                 | µg/L | <5              | <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**

| Sub-Matrix: SOIL                                              |            |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                      |     |
|---------------------------------------------------------------|------------|------|-------|-----------------------------|---------------------------------------|---------------------------|--------------------------------------|-----|
|                                                               |            |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low      High |     |
| Method: Compound                                              | CAS Number | LOR  | Unit  | Result                      |                                       |                           |                                      |     |
| EG005T: Total Metals by ICP-AES (QCLot: 2156301)              |            |      |       |                             |                                       |                           |                                      |     |
| EG005T: Arsenic                                               | 7440-38-2  | 5    | mg/kg | <5                          | 21.7 mg/kg                            | 93.8                      | 78                                   | 107 |
| EG005T: Cadmium                                               | 7440-43-9  | 1    | mg/kg | <1                          | 4.64 mg/kg                            | 90.0                      | 76                                   | 108 |
| EG005T: Copper                                                | 7440-50-8  | 5    | mg/kg | <5                          | 32 mg/kg                              | 93.8                      | 78                                   | 108 |
| EG005T: Lead                                                  | 7439-92-1  | 5    | mg/kg | <5                          | 40 mg/kg                              | 90.5                      | 78                                   | 106 |
| EG005T: Molybdenum                                            | 7439-98-7  | 2    | mg/kg | <2                          | 7.9 mg/kg                             | 98.9                      | 78                                   | 114 |
| EG005T: Nickel                                                | 7440-02-0  | 2    | mg/kg | <2                          | 55 mg/kg                              | 95.3                      | 80                                   | 109 |
| EG005T: Selenium                                              | 7782-49-2  | 5    | mg/kg | <5                          | 5.37 mg/kg                            | 98.4                      | 92                                   | 110 |
| EG005T: Silver                                                | 7440-22-4  | 2    | mg/kg | <2                          | 2.1 mg/kg                             | 80.1                      | 80                                   | 108 |
| EG005T: Tin                                                   | 7440-31-5  | 5    | mg/kg | <5                          | 5.2 mg/kg                             | 95.2                      | 78                                   | 117 |
| EG005T: Zinc                                                  | 7440-66-6  | 5    | mg/kg | <5                          | 60.8 mg/kg                            | 97.6                      | 79                                   | 110 |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 2156302)    |            |      |       |                             |                                       |                           |                                      |     |
| EG035T: Mercury                                               | 7439-97-6  | 0.1  | mg/kg | <0.1                        | 2.57 mg/kg                            | 87.5                      | 77                                   | 104 |
| EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 2156866) |            |      |       |                             |                                       |                           |                                      |     |
| EG048G: Hexavalent Chromium                                   | 18540-29-9 | 0.5  | mg/kg | <0.5                        | 40 mg/kg                              | 93.8                      | 75                                   | 112 |
| EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 2156867) |            |      |       |                             |                                       |                           |                                      |     |
| EG048G: Hexavalent Chromium                                   | 18540-29-9 | 0.5  | mg/kg | <0.5                        | 40 mg/kg                              | 96.0                      | 75                                   | 112 |
| EK026SF: Total CN by Segmented Flow Analyser (QCLot: 2158786) |            |      |       |                             |                                       |                           |                                      |     |
| EK026SF: Total Cyanide                                        | 57-12-5    | 1    | mg/kg | <1                          | 20 mg/kg                              | 98.0                      | 80                                   | 107 |
| EK026SF: Total CN by Segmented Flow Analyser (QCLot: 2158787) |            |      |       |                             |                                       |                           |                                      |     |
| EK026SF: Total Cyanide                                        | 57-12-5    | 1    | mg/kg | <1                          | 20 mg/kg                              | 97.9                      | 80                                   | 107 |
| EK040T: Fluoride Total (QCLot: 2156069)                       |            |      |       |                             |                                       |                           |                                      |     |
| EK040T: Fluoride                                              | 16984-48-8 | 40   | mg/kg | <40                         | 400 mg/kg                             | 106                       | 75                                   | 110 |
| EK040T: Fluoride Total (QCLot: 2156070)                       |            |      |       |                             |                                       |                           |                                      |     |
| EK040T: Fluoride                                              | 16984-48-8 | 40   | mg/kg | <40                         | 400 mg/kg                             | 86.5                      | 75                                   | 110 |
| EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2154979)       |            |      |       |                             |                                       |                           |                                      |     |
| EP066-EM: Total Polychlorinated biphenyls                     | ----       | 0.1  | mg/kg | <0.1                        | 1 mg/kg                               | 116                       | 63                                   | 118 |
| EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2157002)       |            |      |       |                             |                                       |                           |                                      |     |
| EP066: Total Polychlorinated biphenyls                        | ----       | 0.1  | mg/kg | <0.1                        | 1 mg/kg                               | 114                       | 63                                   | 115 |
| EP068A: Organochlorine Pesticides (OC) (QCLot: 2157005)       |            |      |       |                             |                                       |                           |                                      |     |
| EP068: alpha-BHC                                              | 319-84-6   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 108                       | 69                                   | 122 |
| EP068: Hexachlorobenzene (HCB)                                | 118-74-1   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 105                       | 71                                   | 122 |
| EP068: beta-BHC                                               | 319-85-7   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 107                       | 72                                   | 121 |
| EP068: gamma-BHC                                              | 58-89-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 107                       | 66                                   | 124 |



Sub-Matrix: **SOIL**

|                                                                            |            |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                     |      |
|----------------------------------------------------------------------------|------------|------|-------|-----------------------------|---------------------------------------|---------------------------|---------------------|------|
|                                                                            |            |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%) |      |
| Method: Compound                                                           | CAS Number | LOR  | Unit  | Result                      |                                       |                           | Low                 | High |
| <b>EP068A: Organochlorine Pesticides (OC) (QCLot: 2157005) - continued</b> |            |      |       |                             |                                       |                           |                     |      |
| EP068: delta-BHC                                                           | 319-86-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 98.0                      | 60                  | 120  |
| EP068: Heptachlor                                                          | 76-44-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 104                       | 62                  | 120  |
| EP068: Aldrin                                                              | 309-00-2   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 106                       | 70                  | 122  |
| EP068: Heptachlor epoxide                                                  | 1024-57-3  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 106                       | 70                  | 121  |
| EP068: trans-Chlordane                                                     | 5103-74-2  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 104                       | 68                  | 124  |
| EP068: alpha-Endosulfan                                                    | 959-98-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 109                       | 71                  | 124  |
| EP068: cis-Chlordane                                                       | 5103-71-9  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 106                       | 71                  | 122  |
| EP068: Dieldrin                                                            | 60-57-1    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 103                       | 65                  | 123  |
| EP068: 4,4'-DDE                                                            | 72-55-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 105                       | 71                  | 121  |
| EP068: Endrin                                                              | 72-20-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 98.9                      | 63                  | 129  |
| EP068: beta-Endosulfan                                                     | 33213-65-9 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 109                       | 70                  | 122  |
| EP068: 4,4'-DDD                                                            | 72-54-8    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 109                       | 69                  | 128  |
| EP068: Endrin aldehyde                                                     | 7421-93-4  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 109                       | 69                  | 129  |
| EP068: Endosulfan sulfate                                                  | 1031-07-8  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 104                       | 64                  | 129  |
| EP068: 4,4'-DDT                                                            | 50-29-3    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 118                       | 62                  | 129  |
| EP068: Endrin ketone                                                       | 53494-70-5 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 117                       | 76                  | 123  |
| EP068: Methoxychlor                                                        | 72-43-5    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 115                       | 58                  | 129  |
| <b>EP068B: Organophosphorus Pesticides (OP) (QCLot: 2157005)</b>           |            |      |       |                             |                                       |                           |                     |      |
| EP068: Dichlorvos                                                          | 62-73-7    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 111                       | 72                  | 134  |
| EP068: Demeton-S-methyl                                                    | 919-86-8   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 110                       | 63                  | 141  |
| EP068: Monocrotophos                                                       | 6923-22-4  | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 95.0                      | 10                  | 136  |
| EP068: Dimethoate                                                          | 60-51-5    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 96.7                      | 62                  | 130  |
| EP068: Diazinon                                                            | 333-41-5   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 107                       | 70                  | 124  |
| EP068: Chlorpyrifos-methyl                                                 | 5598-13-0  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 106                       | 70                  | 121  |
| EP068: Parathion-methyl                                                    | 298-00-0   | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 102                       | 60                  | 126  |
| EP068: Malathion                                                           | 121-75-5   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 117                       | 65                  | 126  |
| EP068: Fenthion                                                            | 55-38-9    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 108                       | 73                  | 122  |
| EP068: Chlorpyrifos                                                        | 2921-88-2  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 103                       | 67                  | 126  |
| EP068: Parathion                                                           | 56-38-2    | 0.2  | mg/kg | <0.2                        | 0.5 mg/kg                             | 102                       | 59                  | 126  |
| EP068: Pirimphos-ethyl                                                     | 23505-41-1 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 108                       | 67                  | 124  |
| EP068: Chlorfenvinphos                                                     | 470-90-6   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 106                       | 57                  | 130  |
| EP068: Bromophos-ethyl                                                     | 4824-78-6  | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 104                       | 70                  | 122  |
| EP068: Fenamiphos                                                          | 22224-92-6 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 104                       | 54                  | 133  |
| EP068: Prothiofos                                                          | 34643-46-4 | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 106                       | 70                  | 123  |
| EP068: Ethion                                                              | 563-12-2   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 107                       | 67                  | 123  |
| EP068: Carbophenothion                                                     | 786-19-6   | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 108                       | 71                  | 129  |
| EP068: Azinphos Methyl                                                     | 86-50-0    | 0.05 | mg/kg | <0.05                       | 0.5 mg/kg                             | 116                       | 31                  | 141  |
| <b>EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2152801)</b>           |            |      |       |                             |                                       |                           |                     |      |
| EP074-UT: Benzene                                                          | 71-43-2    | 0.2  | mg/kg | <0.2                        | 2.1 mg/kg                             | 84.4                      | 68                  | 117  |



Sub-Matrix: **SOIL**

| Sub-Matrix: SOIL                                                      |            |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |     |
|-----------------------------------------------------------------------|------------|------|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|-----|
|                                                                       |            |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |     |
| Method: Compound                                                      | CAS Number | LOR  | Unit  | Result                      |                                       |                           |                                 |     |
| EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2152801) - continued |            |      |       |                             |                                       |                           |                                 |     |
| EP074-UT: Toluene                                                     | 108-88-3   | 0.5  | mg/kg | <0.5                        | 2.1 mg/kg                             | 83.6                      | 67                              | 118 |
| EP074-UT: Ethylbenzene                                                | 100-41-4   | 0.5  | mg/kg | <0.5                        | 2.1 mg/kg                             | 83.8                      | 66                              | 119 |
| EP074-UT: meta- & para-Xylene                                         | 108-38-3   | 0.5  | mg/kg | <0.5                        | 4.2 mg/kg                             | 82.2                      | 66                              | 115 |
|                                                                       | 106-42-3   |      |       |                             |                                       |                           |                                 |     |
| EP074-UT: Styrene                                                     | 100-42-5   | 0.5  | mg/kg | <0.5                        | 2.1 mg/kg                             | 85.5                      | 71                              | 115 |
| EP074-UT: ortho-Xylene                                                | 95-47-6    | 0.5  | mg/kg | <0.5                        | 2.1 mg/kg                             | 80.8                      | 68                              | 113 |
| EP074H: Naphthalene (QCLot: 2152801)                                  |            |      |       |                             |                                       |                           |                                 |     |
| EP074-UT: Naphthalene                                                 | 91-20-3    | 1    | mg/kg | <1                          | 0.6 mg/kg                             | 91.8                      | 75                              | 113 |
| EP074I: Volatile Halogenated Compounds (QCLot: 2152801)               |            |      |       |                             |                                       |                           |                                 |     |
| EP074-UT: Vinyl chloride                                              | 75-01-4    | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 101                       | 51                              | 136 |
| EP074-UT: 1,1-Dichloroethene                                          | 75-35-4    | 0.01 | mg/kg | <0.01                       | 0.1 mg/kg                             | 84.1                      | 56                              | 125 |
| EP074-UT: Methylene chloride                                          | 75-09-2    | 0.4  | mg/kg | <0.4                        | 2.1 mg/kg                             | 87.8                      | 70                              | 117 |
| EP074-UT: trans-1,2-Dichloroethene                                    | 156-60-5   | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 82.3                      | 61                              | 122 |
| EP074-UT: cis-1,2-Dichloroethene                                      | 156-59-2   | 0.01 | mg/kg | <0.01                       | 0.1 mg/kg                             | 80.6                      | 70                              | 114 |
| EP074-UT: Chloroform                                                  | 67-66-3    | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 81.4                      | 69                              | 112 |
| EP074-UT: 1,1,1-Trichloroethane                                       | 71-55-6    | 0.01 | mg/kg | <0.01                       | 0.1 mg/kg                             | 81.8                      | 62                              | 124 |
| EP074-UT: Carbon Tetrachloride                                        | 56-23-5    | 0.01 | mg/kg | <0.01                       | 0.1 mg/kg                             | 84.3                      | 56                              | 126 |
| EP074-UT: 1,2-Dichloroethane                                          | 107-06-2   | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 95.5                      | 73                              | 118 |
| EP074-UT: Trichloroethene                                             | 79-01-6    | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 79.5                      | 66                              | 117 |
| EP074-UT: 1,1,2-Trichloroethane                                       | 79-00-5    | 0.04 | mg/kg | <0.04                       | 0.1 mg/kg                             | 87.5                      | 76                              | 115 |
| EP074-UT: Tetrachloroethene                                           | 127-18-4   | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 78.1                      | 62                              | 120 |
| EP074-UT: 1,1,1,2-Tetrachloroethane                                   | 630-20-6   | 0.01 | mg/kg | <0.01                       | 0.1 mg/kg                             | 89.3                      | 71                              | 118 |
| EP074-UT: 1,1,2,2-Tetrachloroethane                                   | 79-34-5    | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 89.3                      | 69                              | 119 |
| EP074-UT: Hexachlorobutadiene                                         | 87-68-3    | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 65.1                      | 47                              | 125 |
| EP074-UT: Chlorobenzene                                               | 108-90-7   | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 85.9                      | 73                              | 114 |
| EP074-UT: 1,4-Dichlorobenzene                                         | 106-46-7   | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 90.5                      | 66                              | 114 |
| EP074-UT: 1,2-Dichlorobenzene                                         | 95-50-1    | 0.02 | mg/kg | <0.02                       | 0.1 mg/kg                             | 94.4                      | 73                              | 110 |
| EP074-UT: 1,2,4-Trichlorobenzene                                      | 120-82-1   | 0.01 | mg/kg | <0.01                       | 0.1 mg/kg                             | 81.5                      | 54                              | 121 |
| EP075(SIM)A: Phenolic Compounds (QCLot: 2157004)                      |            |      |       |                             |                                       |                           |                                 |     |
| EP075(SIM): Phenol                                                    | 108-95-2   | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 109                       | 77                              | 125 |
| EP075(SIM): 2-Chlorophenol                                            | 95-57-8    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 111                       | 78                              | 126 |
| EP075(SIM): 2-Methylphenol                                            | 95-48-7    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 112                       | 77                              | 125 |
| EP075(SIM): 3- & 4-Methylphenol                                       | 1319-77-3  | 1    | mg/kg | <1                          | 6 mg/kg                               | 114                       | 76                              | 130 |
| EP075(SIM): 2-Nitrophenol                                             | 88-75-5    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 96.3                      | 53                              | 118 |
| EP075(SIM): 2,4-Dimethylphenol                                        | 105-67-9   | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 109                       | 71                              | 128 |
| EP075(SIM): 2,4-Dichlorophenol                                        | 120-83-2   | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 108                       | 73                              | 126 |
| EP075(SIM): 2,6-Dichlorophenol                                        | 87-65-0    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 110                       | 73                              | 128 |
| EP075(SIM): 4-Chloro-3-methylphenol                                   | 59-50-7    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 106                       | 69                              | 123 |



Sub-Matrix: **SOIL**

|                                                                        |             |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |     |
|------------------------------------------------------------------------|-------------|------|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|-----|
|                                                                        |             |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |     |
| Method: Compound                                                       | CAS Number  | LOR  | Unit  | Result                      |                                       |                           |                                 |     |
| <b>EP075(SIM)A: Phenolic Compounds (QCLot: 2157004) - continued</b>    |             |      |       |                             |                                       |                           |                                 |     |
| EP075(SIM): 2,4,6-Trichlorophenol                                      | 88-06-2     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 105                       | 64                              | 122 |
| EP075(SIM): 2,4,5-Trichlorophenol                                      | 95-95-4     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 106                       | 70                              | 128 |
| EP075(SIM): Pentachlorophenol                                          | 87-86-5     | 2    | mg/kg | <2                          | 6 mg/kg                               | 66.6                      | 20                              | 113 |
| <b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2157004)</b> |             |      |       |                             |                                       |                           |                                 |     |
| EP075(SIM): Naphthalene                                                | 91-20-3     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 111                       | 77                              | 129 |
| EP075(SIM): Acenaphthylene                                             | 208-96-8    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 108                       | 74                              | 130 |
| EP075(SIM): Acenaphthene                                               | 83-32-9     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 109                       | 78                              | 129 |
| EP075(SIM): Fluorene                                                   | 86-73-7     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 107                       | 78                              | 128 |
| EP075(SIM): Phenanthrene                                               | 85-01-8     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 111                       | 83                              | 130 |
| EP075(SIM): Anthracene                                                 | 120-12-7    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 113                       | 76                              | 129 |
| EP075(SIM): Fluoranthene                                               | 206-44-0    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 110                       | 79                              | 134 |
| EP075(SIM): Pyrene                                                     | 129-00-0    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 112                       | 84                              | 135 |
| EP075(SIM): Benz(a)anthracene                                          | 56-55-3     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 108                       | 72                              | 125 |
| EP075(SIM): Chrysene                                                   | 218-01-9    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 112                       | 76                              | 135 |
| EP075(SIM): Benzo(b+j)fluoranthene                                     | 205-99-2    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 104                       | 69                              | 123 |
|                                                                        | 205-82-3    |      |       |                             |                                       |                           |                                 |     |
| EP075(SIM): Benzo(k)fluoranthene                                       | 207-08-9    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 106                       | 77                              | 131 |
| EP075(SIM): Benzo(a)pyrene                                             | 50-32-8     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 98.1                      | 65                              | 116 |
| EP075(SIM): Indeno(1,2,3-cd)pyrene                                     | 193-39-5    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 100                       | 65                              | 124 |
| EP075(SIM): Dibenz(a,h)anthracene                                      | 53-70-3     | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 103                       | 66                              | 127 |
| EP075(SIM): Benzo(g,h,i)perylene                                       | 191-24-2    | 0.5  | mg/kg | <0.5                        | 3 mg/kg                               | 103                       | 65                              | 124 |
| <b>EP075A: Phenolic Compounds (Halogenated) (QCLot: 2154977)</b>       |             |      |       |                             |                                       |                           |                                 |     |
| EP075-EM: 2-Chlorophenol                                               | 95-57-8     | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 93.4                      | 69                              | 123 |
| EP075-EM: 2,4-Dichlorophenol                                           | 120-83-2    | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 106                       | 55                              | 128 |
| EP075-EM: 2,6-Dichlorophenol                                           | 87-65-0     | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 106                       | 70                              | 123 |
| EP075-EM: 4-Chloro-3-methylphenol                                      | 59-50-7     | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 110                       | 56                              | 128 |
| EP075-EM: 2,4,5-Trichlorophenol                                        | 95-95-4     | 0.05 | mg/kg | <0.05                       | 2 mg/kg                               | 102                       | 66                              | 126 |
| EP075-EM: 2,4,6-Trichlorophenol                                        | 88-06-2     | 0.05 | mg/kg | <0.05                       | 2 mg/kg                               | 105                       | 60                              | 126 |
| EP075-EM: 2,3,5,6-Tetrachlorophenol                                    | 935-95-5    | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 84.7                      | 65                              | 124 |
| EP075-EM: 2,3,4,5 & 2,3,4,6-Tetrachlorophenol                          | 4901-51-3/5 | 0.05 | mg/kg | <0.05                       | 4 mg/kg                               | 94.6                      | 64                              | 128 |
|                                                                        | 8-90-2      |      |       |                             |                                       |                           |                                 |     |
| EP075-EM: Pentachlorophenol                                            | 87-86-5     | 0.2  | mg/kg | <0.2                        | 4 mg/kg                               | 67.8                      | 43                              | 127 |
| <b>EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 2154977)</b>   |             |      |       |                             |                                       |                           |                                 |     |
| EP075-EM: Phenol                                                       | 108-95-2    | 1    | mg/kg | <1                          | 2 mg/kg                               | 100                       | 58                              | 126 |
| EP075-EM: 2-Methylphenol                                               | 95-48-7     | 1    | mg/kg | <1                          | 2 mg/kg                               | 104                       | 65                              | 126 |
| EP075-EM: 3- & 4-Methylphenol                                          | 1319-77-3   | 1    | mg/kg | <1                          | 4 mg/kg                               | 109                       | 64                              | 123 |
| EP075-EM: 2-Nitrophenol                                                | 88-75-5     | 1    | mg/kg | <1                          | 2 mg/kg                               | 107                       | 53                              | 128 |
| EP075-EM: 2,4-Dimethylphenol                                           | 105-67-9    | 1    | mg/kg | <1                          | 2 mg/kg                               | 106                       | 56                              | 136 |





Sub-Matrix: **SOIL**

| Sub-Matrix: SOIL                                                          |            |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |     |
|---------------------------------------------------------------------------|------------|------|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|-----|
|                                                                           |            |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |     |
| Method: Compound                                                          | CAS Number | LOR  | Unit  | Result                      |                                       |                           |                                 |     |
| EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 2154977) - continued |            |      |       |                             |                                       |                           |                                 |     |
| EP075-EM: 2,4-Dinitrophenol                                               | 51-28-5    | 5    | mg/kg | <5                          | 12 mg/kg                              | 87.8                      | 41                              | 156 |
| EP075-EM: 4-Nitrophenol                                                   | 100-02-7   | 5    | mg/kg | <5                          | 12 mg/kg                              | 85.4                      | 48                              | 130 |
| EP075-EM: 2-Methyl-4,6-dinitrophenol                                      | 8071-51-0  | 5    | mg/kg | <5                          | 12 mg/kg                              | 101                       | 47                              | 125 |
| EP075-EM: Dinoseb                                                         | 88-85-7    | 5    | mg/kg | <5                          | 12 mg/kg                              | 98.4                      | 51                              | 123 |
| EP075-EM: 2-Cyclohexyl-4,6-Dinitrophenol                                  | 131-89-5   | 5    | mg/kg | <5                          | 10 mg/kg                              | 95.8                      | 36                              | 137 |
| EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2154977)                |            |      |       |                             |                                       |                           |                                 |     |
| EP075-EM: Naphthalene                                                     | 91-20-3    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 103                       | 70                              | 123 |
| EP075-EM: Acenaphthene                                                    | 83-32-9    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 96.6                      | 70                              | 130 |
| EP075-EM: Acenaphthylene                                                  | 208-96-8   | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 95.6                      | 68                              | 131 |
| EP075-EM: Fluorene                                                        | 86-73-7    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 99.7                      | 72                              | 128 |
| EP075-EM: Phenanthrene                                                    | 85-01-8    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 94.2                      | 75                              | 128 |
| EP075-EM: Anthracene                                                      | 120-12-7   | 0.5  | mg/kg | <0.5                        | 1 mg/kg                               | 92.3                      | 55                              | 127 |
| EP075-EM: Fluoranthene                                                    | 206-44-0   | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 94.1                      | 75                              | 128 |
| EP075-EM: Pyrene                                                          | 129-00-0   | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 95.3                      | 73                              | 130 |
| EP075-EM: Benz(a)anthracene                                               | 56-55-3    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 91.4                      | 72                              | 131 |
| EP075-EM: Chrysene                                                        | 218-01-9   | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 99.8                      | 77                              | 133 |
| EP075-EM: Benzo(b+j) & Benzo(k)fluoranthene                               | 205-99-2   | 0.5  | mg/kg | <0.5                        | 4 mg/kg                               | 116                       | 76                              | 133 |
|                                                                           | 207-08-9   |      |       |                             |                                       |                           |                                 |     |
| EP075-EM: Benzo(a)pyrene                                                  | 50-32-8    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 107                       | 70                              | 130 |
| EP075-EM: Indeno(1,2,3.cd)pyrene                                          | 193-39-5   | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 116                       | 72                              | 134 |
| EP075-EM: Dibenz(a,h)anthracene                                           | 53-70-3    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 118                       | 72                              | 135 |
| EP075-EM: Benzo(g,h,i)perylene                                            | 191-24-2   | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 118                       | 71                              | 134 |
| EP075I: Organochlorine Pesticides (QCLot: 2154977)                        |            |      |       |                             |                                       |                           |                                 |     |
| EP075-EM: alpha-BHC                                                       | 319-84-6   | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 101                       | 71                              | 122 |
| EP075-EM: Hexachlorobenzene (HCB)                                         | 118-74-1   | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 86.2                      | 70                              | 126 |
| EP075-EM: beta-BHC                                                        | 319-85-7   | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 111                       | 70                              | 130 |
| EP075-EM: gamma-BHC                                                       | 58-89-9    | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 101                       | 71                              | 129 |
| EP075-EM: delta-BHC                                                       | 319-86-8   | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 94.6                      | 74                              | 128 |
| EP075-EM: Heptachlor                                                      | 76-44-8    | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 90.5                      | 72                              | 126 |
| EP075-EM: Aldrin                                                          | 309-00-2   | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 94.2                      | 72                              | 127 |
| EP075-EM: Heptachlor epoxide                                              | 1024-57-3  | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 92.6                      | 73                              | 129 |
| EP075-EM: cis-Chlordane                                                   | 5103-71-9  | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 93.6                      | 72                              | 131 |
| EP075-EM: trans-Chlordane                                                 | 5103-74-2  | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 92.3                      | 73                              | 130 |
| EP075-EM: Endosulfan 1                                                    | 959-98-8   | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 101                       | 64                              | 137 |
| EP075-EM: 4,4'-DDE                                                        | 72-55-9    | 0.05 | mg/kg | <0.05                       | 2 mg/kg                               | 97.9                      | 73                              | 131 |
| EP075-EM: Dieldrin                                                        | 60-57-1    | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 98.2                      | 72                              | 132 |
| EP075-EM: Endrin aldehyde                                                 | 7421-93-4  | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 112                       | 42                              | 160 |
| EP075-EM: Endrin                                                          | 72-20-8    | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 102                       | 55                              | 148 |
| EP075-EM: Endosulfan 2                                                    | 33213-65-9 | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 102                       | 73                              | 132 |



| Sub-Matrix: SOIL                                                                        |             |      |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                 |      |
|-----------------------------------------------------------------------------------------|-------------|------|-------|-----------------------------|---------------------------------------|---------------------------|---------------------------------|------|
|                                                                                         |             |      |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low High |      |
| Method: Compound                                                                        | CAS Number  | LOR  | Unit  | Result                      |                                       |                           |                                 |      |
| <b>EP075I: Organochlorine Pesticides (QCLot: 2154977) - continued</b>                   |             |      |       |                             |                                       |                           |                                 |      |
| EP075-EM: 4,4'-DDD                                                                      | 72-54-8     | 0.05 | mg/kg | <0.05                       | 2 mg/kg                               | 107                       | 75                              | 134  |
| EP075-EM: Endosulfan sulfate                                                            | 1031-07-8   | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 99.4                      | 73                              | 133  |
| EP075-EM: 4,4'-DDT                                                                      | 50-29-3     | 0.05 | mg/kg | <0.05                       | 2 mg/kg                               | 109                       | 67                              | 133  |
| EP075-EM: Methoxychlor                                                                  | 72-43-5     | 0.03 | mg/kg | <0.03                       | 2 mg/kg                               | 114                       | 67                              | 135  |
| <b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 2152801)</b>                         |             |      |       |                             |                                       |                           |                                 |      |
| EP074-UT: C6 - C9 Fraction                                                              | ----        | 10   | mg/kg | <10                         | 39.6 mg/kg                            | 86.2                      | 63                              | 122  |
| <b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 2153485)</b>                         |             |      |       |                             |                                       |                           |                                 |      |
| EP080: C6 - C9 Fraction                                                                 | ----        | 10   | mg/kg | <10                         | 36 mg/kg                              | 102                       | 61                              | 127  |
| <b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 2154978)</b>                         |             |      |       |                             |                                       |                           |                                 |      |
| EP071-EM: C10 - C14 Fraction                                                            | ----        | 50   | mg/kg | <50                         | 806 mg/kg                             | 106                       | 70                              | 120  |
| EP071-EM: C15 - C28 Fraction                                                            | ----        | 100  | mg/kg | <100                        | 3006 mg/kg                            | 104                       | 83                              | 121  |
| EP071-EM: C29 - C36 Fraction                                                            | ----        | 100  | mg/kg | <100                        | 1584 mg/kg                            | 94.9                      | 77                              | 117  |
| <b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 2157003)</b>                         |             |      |       |                             |                                       |                           |                                 |      |
| EP071: C10 - C14 Fraction                                                               | ----        | 50   | mg/kg | <50                         | 806 mg/kg                             | 96.6                      | 72                              | 122  |
| EP071: C15 - C28 Fraction                                                               | ----        | 100  | mg/kg | <100                        | 3006 mg/kg                            | 101                       | 84                              | 123  |
| EP071: C29 - C36 Fraction                                                               | ----        | 100  | mg/kg | <100                        | 1584 mg/kg                            | 98.8                      | 79                              | 119  |
| EP071: C10 - C36 Fraction (sum)                                                         | ----        | 50   | mg/kg | <50                         | ----                                  | ----                      | ----                            | ---- |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2152801)</b> |             |      |       |                             |                                       |                           |                                 |      |
| EP074-UT: C6 - C10 Fraction                                                             | C6_C10      | 10   | mg/kg | <10                         | 48.9 mg/kg                            | 86.2                      | 62                              | 121  |
| EP074-UT: C6 - C10 Fraction minus BTEX (F1)                                             | C6_C10-BTEX | 10   | mg/kg | <10                         | ----                                  | ----                      | ----                            | ---- |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2153485)</b> |             |      |       |                             |                                       |                           |                                 |      |
| EP080: C6 - C10 Fraction                                                                | C6_C10      | 10   | mg/kg | <10                         | 45 mg/kg                              | 101                       | 60                              | 125  |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2154978)</b> |             |      |       |                             |                                       |                           |                                 |      |
| EP071-EM: >C10 - C16 Fraction                                                           | ----        | 50   | mg/kg | <50                         | 1160 mg/kg                            | 108                       | 75                              | 119  |
| EP071-EM: >C16 - C34 Fraction                                                           | ----        | 100  | mg/kg | <100                        | 3978 mg/kg                            | 99.2                      | 82                              | 119  |
| EP071-EM: >C34 - C40 Fraction                                                           | ----        | 100  | mg/kg | <100                        | 313 mg/kg                             | 89.1                      | 68                              | 124  |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2157003)</b> |             |      |       |                             |                                       |                           |                                 |      |
| EP071: >C10 - C16 Fraction                                                              | ----        | 50   | mg/kg | <50                         | 1160 mg/kg                            | 102                       | 77                              | 121  |
| EP071: >C16 - C34 Fraction                                                              | ----        | 100  | mg/kg | <100                        | 3978 mg/kg                            | 100                       | 83                              | 121  |
| EP071: >C34 - C40 Fraction                                                              | ----        | 100  | mg/kg | <100                        | 313 mg/kg                             | 96.7                      | 65                              | 123  |
| EP071: >C10 - C40 Fraction (sum)                                                        | ----        | 50   | mg/kg | <50                         | ----                                  | ----                      | ----                            | ---- |
| <b>EP080: BTEXN (QCLot: 2153485)</b>                                                    |             |      |       |                             |                                       |                           |                                 |      |
| EP080: Benzene                                                                          | 71-43-2     | 0.2  | mg/kg | <0.2                        | 2 mg/kg                               | 82.4                      | 63                              | 119  |
| EP080: Toluene                                                                          | 108-88-3    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 91.2                      | 67                              | 126  |
| EP080: Ethylbenzene                                                                     | 100-41-4    | 0.5  | mg/kg | <0.5                        | 2 mg/kg                               | 91.1                      | 66                              | 124  |



| Sub-Matrix: SOIL                          |            |     |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                      |     |
|-------------------------------------------|------------|-----|-------|-----------------------------|---------------------------------------|---------------------------|--------------------------------------|-----|
|                                           |            |     |       |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low      High |     |
| Method: Compound                          | CAS Number | LOR | Unit  | Result                      |                                       |                           |                                      |     |
| EP080: BTEXN (QCLot: 2153485) - continued |            |     |       |                             |                                       |                           |                                      |     |
| EP080: meta- & para-Xylene                | 108-38-3   | 0.5 | mg/kg | <0.5                        | 4 mg/kg                               | 100                       | 68                                   | 128 |
|                                           | 106-42-3   |     |       |                             |                                       |                           |                                      |     |
| EP080: ortho-Xylene                       | 95-47-6    | 0.5 | mg/kg | <0.5                        | 2 mg/kg                               | 101                       | 73                                   | 128 |
| EP080: Naphthalene                        | 91-20-3    | 1   | mg/kg | <1                          | 0.5 mg/kg                             | 86.6                      | 61                                   | 123 |

| Sub-Matrix: WATER                                                                |            |     |      | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                           |                                      |     |
|----------------------------------------------------------------------------------|------------|-----|------|-----------------------------|---------------------------------------|---------------------------|--------------------------------------|-----|
|                                                                                  |            |     |      |                             | Spike<br>Concentration                | Spike Recovery (%)<br>LCS | Recovery Limits (%)<br>Low      High |     |
| Method: Compound                                                                 | CAS Number | LOR | Unit | Result                      |                                       |                           |                                      |     |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2158116)                         |            |     |      |                             |                                       |                           |                                      |     |
| EP080: C6 - C9 Fraction                                                          | ----       | 20  | µg/L | <20                         | 360 µg/L                              | 87.7                      | 65                                   | 126 |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2158116) |            |     |      |                             |                                       |                           |                                      |     |
| EP080: C6 - C10 Fraction                                                         | C6_C10     | 20  | µg/L | <20                         | 450 µg/L                              | 87.2                      | 64                                   | 124 |
| EP080: BTEXN (QCLot: 2158116)                                                    |            |     |      |                             |                                       |                           |                                      |     |
| EP080: Benzene                                                                   | 71-43-2    | 1   | µg/L | <1                          | 20 µg/L                               | 91.6                      | 69                                   | 123 |
| EP080: Toluene                                                                   | 108-88-3   | 2   | µg/L | <2                          | 20 µg/L                               | 91.4                      | 73                                   | 124 |
| EP080: Ethylbenzene                                                              | 100-41-4   | 2   | µg/L | <2                          | 20 µg/L                               | 89.4                      | 71                                   | 125 |
| EP080: meta- & para-Xylene                                                       | 108-38-3   | 2   | µg/L | <2                          | 40 µg/L                               | 92.2                      | 72                                   | 129 |
|                                                                                  | 106-42-3   |     |      |                             |                                       |                           |                                      |     |
| EP080: ortho-Xylene                                                              | 95-47-6    | 2   | µg/L | <2                          | 20 µg/L                               | 97.9                      | 76                                   | 129 |
| EP080: Naphthalene                                                               | 91-20-3    | 5   | µg/L | <5                          | 5 µg/L                                | 100                       | 70                                   | 125 |

## 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: <b>SOIL</b>                                    |                  |                    |            | Matrix Spike (MS) Report |                  |                     |      |
|------------------------------------------------------------|------------------|--------------------|------------|--------------------------|------------------|---------------------|------|
|                                                            |                  |                    |            | Spike                    | SpikeRecovery(%) | Recovery Limits (%) |      |
| Laboratory sample ID                                       | Client sample ID | Method: Compound   | CAS Number | Concentration            | MS               | Low                 | High |
| EG005T: Total Metals by ICP-AES (QCLot: 2156301)           |                  |                    |            |                          |                  |                     |      |
| EM1900927-002                                              | Anonymous        | EG005T: Arsenic    | 7440-38-2  | 50 mg/kg                 | 96.4             | 78                  | 124  |
|                                                            |                  | EG005T: Cadmium    | 7440-43-9  | 50 mg/kg                 | 95.8             | 84                  | 116  |
|                                                            |                  | EG005T: Copper     | 7440-50-8  | 50 mg/kg                 | 103              | 82                  | 124  |
|                                                            |                  | EG005T: Lead       | 7439-92-1  | 50 mg/kg                 | 95.3             | 76                  | 124  |
|                                                            |                  | EG005T: Molybdenum | 7439-98-7  | 50 mg/kg                 | 86.9             | 79                  | 117  |
|                                                            |                  | EG005T: Nickel     | 7440-02-0  | 50 mg/kg                 | 95.7             | 78                  | 120  |
|                                                            |                  | EG005T: Selenium   | 7782-49-2  | 50 mg/kg                 | 92.9             | 71                  | 125  |
|                                                            |                  | EG005T: Zinc       | 7440-66-6  | 50 mg/kg                 | 95.8             | 74                  | 128  |
| EG035T: Total Recoverable Mercury by FIMS (QCLot: 2156302) |                  |                    |            |                          |                  |                     |      |
| EM1900927-002                                              | Anonymous        | EG035T: Mercury    | 7439-97-6  | 5 mg/kg                  | 98.0             | 76                  | 116  |



Sub-Matrix: **SOIL**

| 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 |
| EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 2156866) |                  |                                           |            |                          |                  |                     |      |
| EM1900810-009                                                 | Anonymous        | EG048G: Hexavalent Chromium               | 18540-29-9 | 40 mg/kg                 | 94.8             | 58                  | 114  |
| EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 2156867) |                  |                                           |            |                          |                  |                     |      |
| EM1900929-021                                                 | TP08_0.1         | EG048G: Hexavalent Chromium               | 18540-29-9 | 40 mg/kg                 | # 40.1           | 58                  | 114  |
| EK026SF: Total CN by Segmented Flow Analyser (QCLot: 2158786) |                  |                                           |            |                          |                  |                     |      |
| EM1900810-037                                                 | Anonymous        | EK026SF: Total Cyanide                    | 57-12-5    | 20 mg/kg                 | 104              | 77                  | 113  |
| EK026SF: Total CN by Segmented Flow Analyser (QCLot: 2158787) |                  |                                           |            |                          |                  |                     |      |
| EM1900929-031                                                 | CS04             | EK026SF: Total Cyanide                    | 57-12-5    | 20 mg/kg                 | 103              | 77                  | 113  |
| EK040T: Fluoride Total (QCLot: 2156069)                       |                  |                                           |            |                          |                  |                     |      |
| EM1900814-015                                                 | Anonymous        | EK040T: Fluoride                          | 16984-48-8 | 400 mg/kg                | 95.0             | 70                  | 130  |
| EK040T: Fluoride Total (QCLot: 2156070)                       |                  |                                           |            |                          |                  |                     |      |
| EM1900929-021                                                 | TP08_0.1         | EK040T: Fluoride                          | 16984-48-8 | 400 mg/kg                | 85.5             | 70                  | 130  |
| EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2154979)       |                  |                                           |            |                          |                  |                     |      |
| EM1900810-033                                                 | Anonymous        | EP066-EM: Total Polychlorinated biphenyls | ----       | 1 mg/kg                  | 126              | 36                  | 152  |
| EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2157002)       |                  |                                           |            |                          |                  |                     |      |
| EM1900927-018                                                 | Anonymous        | EP066: Total Polychlorinated biphenyls    | ----       | 1 mg/kg                  | 126              | 44                  | 144  |
| EP068A: Organochlorine Pesticides (OC) (QCLot: 2157005)       |                  |                                           |            |                          |                  |                     |      |
| EM1900927-018                                                 | Anonymous        | EP068: gamma-BHC                          | 58-89-9    | 0.5 mg/kg                | 86.9             | 22                  | 139  |
|                                                               |                  | EP068: Heptachlor                         | 76-44-8    | 0.5 mg/kg                | 81.7             | 18                  | 130  |
|                                                               |                  | EP068: Aldrin                             | 309-00-2   | 0.5 mg/kg                | 93.3             | 23                  | 136  |
|                                                               |                  | EP068: Dieldrin                           | 60-57-1    | 0.5 mg/kg                | 83.4             | 42                  | 136  |
|                                                               |                  | EP068: Endrin                             | 72-20-8    | 0.5 mg/kg                | 93.0             | 23                  | 146  |
|                                                               |                  | EP068: 4,4`-DDT                           | 50-29-3    | 0.5 mg/kg                | 98.4             | 20                  | 133  |
| EP068B: Organophosphorus Pesticides (OP) (QCLot: 2157005)     |                  |                                           |            |                          |                  |                     |      |
| EM1900927-018                                                 | Anonymous        | EP068: Diazinon                           | 333-41-5   | 0.5 mg/kg                | 87.2             | 49                  | 135  |
|                                                               |                  | EP068: Chlorpyrifos-methyl                | 5598-13-0  | 0.5 mg/kg                | 78.2             | 41                  | 127  |
|                                                               |                  | EP068: Pirimphos-ethyl                    | 23505-41-1 | 0.5 mg/kg                | 80.4             | 47                  | 133  |
|                                                               |                  | EP068: Bromophos-ethyl                    | 4824-78-6  | 0.5 mg/kg                | 71.8             | 45                  | 133  |
|                                                               |                  | EP068: Prothiofos                         | 34643-46-4 | 0.5 mg/kg                | 72.0             | 40                  | 128  |
| EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2152801)     |                  |                                           |            |                          |                  |                     |      |
| EM1900929-012                                                 | TP05_0.1         | EP074-UT: Benzene                         | 71-43-2    | 2 mg/kg                  | 84.6             | 50                  | 138  |
|                                                               |                  | EP074-UT: Toluene                         | 108-88-3   | 2 mg/kg                  | 87.5             | 56                  | 134  |
| EP074I: Volatile Halogenated Compounds (QCLot: 2152801)       |                  |                                           |            |                          |                  |                     |      |
| EM1900929-012                                                 | TP05_0.1         | EP074-UT: 1,1-Dichloroethene              | 75-35-4    | 2 mg/kg                  | 88.8             | 26                  | 141  |
|                                                               |                  | EP074-UT: Trichloroethene                 | 79-01-6    | 2 mg/kg                  | 77.5             | 50                  | 134  |
|                                                               |                  | EP074-UT: Chlorobenzene                   | 108-90-7   | 2 mg/kg                  | 89.3             | 28                  | 134  |



| 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 |
| EP075(SIM)A: Phenolic Compounds (QCLot: 2157004)                                 |                  |                                     |            |                          |                  |                     |      |
| EM1900927-007                                                                    | Anonymous        | EP075(SIM): Phenol                  | 108-95-2   | 3 mg/kg                  | 106              | 63                  | 117  |
|                                                                                  |                  | EP075(SIM): 2-Chlorophenol          | 95-57-8    | 3 mg/kg                  | 106              | 65                  | 123  |
|                                                                                  |                  | EP075(SIM): 2-Nitrophenol           | 88-75-5    | 3 mg/kg                  | 95.2             | 40                  | 134  |
|                                                                                  |                  | EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7    | 3 mg/kg                  | 102              | 56                  | 122  |
|                                                                                  |                  | EP075(SIM): Pentachlorophenol       | 87-86-5    | 3 mg/kg                  | 69.4             | 15                  | 139  |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2157004)                  |                  |                                     |            |                          |                  |                     |      |
| EM1900927-007                                                                    | Anonymous        | EP075(SIM): Acenaphthene            | 83-32-9    | 3 mg/kg                  | 103              | 67                  | 117  |
|                                                                                  |                  | EP075(SIM): Pyrene                  | 129-00-0   | 3 mg/kg                  | 105              | 52                  | 148  |
| EP075A: Phenolic Compounds (Halogenated) (QCLot: 2154977)                        |                  |                                     |            |                          |                  |                     |      |
| EM1900810-009                                                                    | Anonymous        | EP075-EM: 2-Chlorophenol            | 95-57-8    | 1 mg/kg                  | 87.7             | 34                  | 118  |
|                                                                                  |                  | EP075-EM: 4-Chloro-3-methylphenol   | 59-50-7    | 1 mg/kg                  | 102              | 41                  | 139  |
|                                                                                  |                  | EP075-EM: Pentachlorophenol         | 87-86-5    | 1 mg/kg                  | 40.9             | 10                  | 144  |
| EP075A: Phenolic Compounds (Non-halogenated) (QCLot: 2154977)                    |                  |                                     |            |                          |                  |                     |      |
| EM1900810-009                                                                    | Anonymous        | EP075-EM: Phenol                    | 108-95-2   | 1 mg/kg                  | 91.8             | 32                  | 134  |
|                                                                                  |                  | EP075-EM: 2-Nitrophenol             | 88-75-5    | 1 mg/kg                  | 90.3             | 13                  | 129  |
| EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2154977)                       |                  |                                     |            |                          |                  |                     |      |
| EM1900810-009                                                                    | Anonymous        | EP075-EM: Acenaphthene              | 83-32-9    | 1 mg/kg                  | 88.8             | 46                  | 138  |
|                                                                                  |                  | EP075-EM: Pyrene                    | 129-00-0   | 1 mg/kg                  | 92.1             | 27                  | 169  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2152801)                         |                  |                                     |            |                          |                  |                     |      |
| EM1900929-012                                                                    | TP05_0.1         | EP074-UT: C6 - C9 Fraction          | ----       | 28 mg/kg                 | 79.9             | 43                  | 111  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2153485)                         |                  |                                     |            |                          |                  |                     |      |
| EM1900816-008                                                                    | Anonymous        | EP080: C6 - C9 Fraction             | ----       | 28 mg/kg                 | 91.1             | 42                  | 131  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2154978)                         |                  |                                     |            |                          |                  |                     |      |
| EM1900810-018                                                                    | Anonymous        | EP071-EM: C10 - C14 Fraction        | ----       | 806 mg/kg                | 102              | 53                  | 123  |
|                                                                                  |                  | EP071-EM: C15 - C28 Fraction        | ----       | 3006 mg/kg               | 105              | 70                  | 124  |
|                                                                                  |                  | EP071-EM: C29 - C36 Fraction        | ----       | 1584 mg/kg               | 95.4             | 64                  | 118  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2157003)                         |                  |                                     |            |                          |                  |                     |      |
| EM1900927-022                                                                    | Anonymous        | EP071: C10 - C14 Fraction           | ----       | 806 mg/kg                | 93.4             | 53                  | 123  |
|                                                                                  |                  | EP071: C15 - C28 Fraction           | ----       | 3006 mg/kg               | 97.6             | 70                  | 124  |
|                                                                                  |                  | EP071: C29 - C36 Fraction           | ----       | 1584 mg/kg               | 95.5             | 64                  | 118  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2152801) |                  |                                     |            |                          |                  |                     |      |
| EM1900929-012                                                                    | TP05_0.1         | EP074-UT: C6 - C10 Fraction         | C6_C10     | 33 mg/kg                 | 77.4             | 42                  | 106  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2153485) |                  |                                     |            |                          |                  |                     |      |
| EM1900816-008                                                                    | Anonymous        | EP080: C6 - C10 Fraction            | C6_C10     | 33 mg/kg                 | 88.6             | 39                  | 129  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2154978) |                  |                                     |            |                          |                  |                     |      |

Page : 23 of 23  
 Work Order : EM1900929  
 Client : GHD PTY LTD  
 Project : 3136558



Sub-Matrix: **SOIL**

| Sub-Matrix: SOIL                                                                             |                  |                               |            | Matrix Spike (MS) Report |                  |                     |      |
|----------------------------------------------------------------------------------------------|------------------|-------------------------------|------------|--------------------------|------------------|---------------------|------|
|                                                                                              |                  |                               |            | Spike                    | SpikeRecovery(%) | Recovery Limits (%) |      |
| Laboratory sample ID                                                                         | Client sample ID | Method: Compound              | CAS Number | Concentration            | MS               | Low                 | High |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2154978) - continued |                  |                               |            |                          |                  |                     |      |
| EM1900810-018                                                                                | Anonymous        | EP071-EM: >C10 - C16 Fraction | ----       | 1160 mg/kg               | 106              | 65                  | 123  |
|                                                                                              |                  | EP071-EM: >C16 - C34 Fraction | ----       | 3978 mg/kg               | 100              | 67                  | 121  |
|                                                                                              |                  | EP071-EM: >C34 - C40 Fraction | ----       | 313 mg/kg                | 91.3             | 44                  | 126  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2157003)             |                  |                               |            |                          |                  |                     |      |
| EM1900927-022                                                                                | Anonymous        | EP071: >C10 - C16 Fraction    | ----       | 1160 mg/kg               | 97.9             | 65                  | 123  |
|                                                                                              |                  | EP071: >C16 - C34 Fraction    | ----       | 3978 mg/kg               | 97.0             | 67                  | 121  |
|                                                                                              |                  | EP071: >C34 - C40 Fraction    | ----       | 313 mg/kg                | 94.6             | 44                  | 126  |
| EP080: BTEXN (QCLot: 2153485)                                                                |                  |                               |            |                          |                  |                     |      |
| EM1900816-008                                                                                | Anonymous        | EP080: Benzene                | 71-43-2    | 2 mg/kg                  | 92.7             | 50                  | 136  |
|                                                                                              |                  | EP080: Toluene                | 108-88-3   | 2 mg/kg                  | 97.4             | 56                  | 139  |

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 |
| <b>EP080/071: Total Petroleum Hydrocarbons (QCLot: 2158116)</b>                         |                  |                          |            |                          |                  |                     |      |
| EM1900813-023                                                                           | Anonymous        | EP080: C6 - C9 Fraction  | ----       | 280 µg/L                 | 69.6             | 43                  | 125  |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2158116)</b> |                  |                          |            |                          |                  |                     |      |
| EM1900813-023                                                                           | Anonymous        | EP080: C6 - C10 Fraction | C6_C10     | 330 µg/L                 | 68.8             | 44                  | 122  |
| <b>EP080: BTEXN (QCLot: 2158116)</b>                                                    |                  |                          |            |                          |                  |                     |      |
| EM1900813-023                                                                           | Anonymous        | EP080: Benzene           | 71-43-2    | 20 µg/L                  | 90.9             | 68                  | 130  |
|                                                                                         |                  | EP080: Toluene           | 108-88-3   | 20 µg/L                  | 91.9             | 72                  | 132  |

## QA/QC Compliance Assessment to assist with Quality Review

|              |                                                    |                         |                                    |
|--------------|----------------------------------------------------|-------------------------|------------------------------------|
| Work Order   | : EM1900929                                        | Page                    | : 1 of 14                          |
| Client       | : GHD PTY LTD                                      | Laboratory              | : Environmental Division Melbourne |
| Contact      | : KORY AUCH                                        | Telephone               | : +6138549 9630                    |
| Project      | : 3136558                                          | Date Samples Received   | : 23-Jan-2019                      |
| Site         | : Wonthaggi PSP - Targeted Intrusive Investigation | Issue Date              | : 01-Feb-2019                      |
| Sampler      | : KA                                               | No. of samples received | : 41                               |
| Order number | :                                                  | No. of samples analysed | : 23                               |

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                                         |
|----------------------------------------------|----------------------|------------------|---------------------|------------|--------|---------|-------------------------------------------------|
| <b>Matrix Spike (MS) Recoveries</b>          |                      |                  |                     |            |        |         |                                                 |
| EG048: Hexavalent Chromium (Alkaline Digest) | EM1900929--021       | TP08_0.1         | Hexavalent Chromium | 18540-29-9 | 40.1 % | 58-114% | Recovery less than lower data quality objective |

## 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                                                                                                                                                                    | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                                                                                                           |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EA001: pH in soil using 0.01M CaCl extract                                                                                                                                |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EA001)<br>TP04_0.2, CS02,<br>CS04, CS07,<br>FD02                                                                                            | 22-Jan-2019 | 29-Jan-2019              | 29-Jan-2019        | ✔          | 29-Jan-2019   | 29-Jan-2019      | ✔          |
| Soil Glass Jar - Unpreserved (EA001)<br>TP05_0.1, TP08_0.1,<br>TP09_0.1, FD03                                                                                             | 23-Jan-2019 | 30-Jan-2019              | 30-Jan-2019        | ✔          | 30-Jan-2019   | 30-Jan-2019      | ✔          |
| EA055: Moisture Content (Dried @ 105-110°C)                                                                                                                               |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EA055)<br>TP01_0.5, TP02_0.1,<br>TP02_0.5, TP03_0.1,<br>TP04_0.2, CS01,<br>CS02, CS03,<br>CS04, CS05,<br>CS06, CS07,<br>CS08, FD01,<br>FD02 | 22-Jan-2019 | ----                     | ----               | ----       | 24-Jan-2019   | 05-Feb-2019      | ✔          |
| Soil Glass Jar - Unpreserved (EA055)<br>TP05_0.1, TP06_0.1,<br>TP07_0.1, TP08_0.1,<br>TP09_0.1, FD03                                                                      | 23-Jan-2019 | ----                     | ----               | ----       | 24-Jan-2019   | 06-Feb-2019      | ✔          |





Matrix: **SOIL**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

| Method                                                                                     |                                   | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|--------------------------------------------------------------------------------------------|-----------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                            |                                   |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EA200: AS 4964 - 2004 Identification of Asbestos in Soils                                  |                                   |             |                          |                    |            |               |                  |            |
| Snap Lock Bag: Separate bag received (EA200)<br>TP02_0.1, TP04_0.2, CS02, CS04, CS06, CS08 | TP03_0.1, CS01, CS03, CS05, CS07, | 22-Jan-2019 | ----                     | ----               | ----       | 24-Jan-2019   | 21-Jul-2019      | ✓          |
| Snap Lock Bag: Separate bag received (EA200)<br>TP05_0.1, TP07_0.1, TP09_0.1               | TP06_0.1, TP08_0.1,               | 23-Jan-2019 | ----                     | ----               | ----       | 24-Jan-2019   | 22-Jul-2019      | ✓          |
| EG005T: Total Metals by ICP-AES                                                            |                                   |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG005T)<br>TP04_0.2, CS04, FD02                              | CS02, CS07,                       | 22-Jan-2019 | 30-Jan-2019              | 21-Jul-2019        | ✓          | 30-Jan-2019   | 21-Jul-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EG005T)<br>TP05_0.1, TP09_0.1,                               | TP08_0.1, FD03                    | 23-Jan-2019 | 30-Jan-2019              | 22-Jul-2019        | ✓          | 30-Jan-2019   | 22-Jul-2019      | ✓          |
| EG035T: Total Recoverable Mercury by FIMS                                                  |                                   |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG035T)<br>TP04_0.2, CS04, FD02                              | CS02, CS07,                       | 22-Jan-2019 | 30-Jan-2019              | 19-Feb-2019        | ✓          | 01-Feb-2019   | 19-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EG035T)<br>TP05_0.1, TP09_0.1,                               | TP08_0.1, FD03                    | 23-Jan-2019 | 30-Jan-2019              | 20-Feb-2019        | ✓          | 01-Feb-2019   | 20-Feb-2019      | ✓          |
| EG048: Hexavalent Chromium (Alkaline Digest)                                               |                                   |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EG048G)<br>TP04_0.2, CS04, FD02                              | CS02, CS07,                       | 22-Jan-2019 | 29-Jan-2019              | 19-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EG048G)<br>TP05_0.1, TP09_0.1,                               | TP08_0.1, FD03                    | 23-Jan-2019 | 29-Jan-2019              | 20-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |



Matrix: **SOIL**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

| Method                                                                                    |                                                  | Sample Date | Extraction / Preparation |                    |            |  | Analysis      |                  |            |
|-------------------------------------------------------------------------------------------|--------------------------------------------------|-------------|--------------------------|--------------------|------------|--|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                           |                                                  |             | Date extracted           | Due for extraction | Evaluation |  | Date analysed | Due for analysis | Evaluation |
| EK026SF: Total CN by Segmented Flow Analyser                                              |                                                  |             |                          |                    |            |  |               |                  |            |
| Soil Glass Jar - Unpreserved (EK026SF)<br>TP04_0.2,<br>CS04,<br>FD02                      | CS02,<br>CS07,                                   | 22-Jan-2019 | 29-Jan-2019              | 05-Feb-2019        | ✓          |  | 30-Jan-2019   | 12-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EK026SF)<br>TP05_0.1,<br>TP09_0.1,                          | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 29-Jan-2019              | 06-Feb-2019        | ✓          |  | 30-Jan-2019   | 12-Feb-2019      | ✓          |
| EK040T: Fluoride Total                                                                    |                                                  |             |                          |                    |            |  |               |                  |            |
| Soil Glass Jar - Unpreserved (EK040T)<br>TP04_0.2                                         |                                                  | 22-Jan-2019 | 25-Jan-2019              | 19-Feb-2019        | ✓          |  | 29-Jan-2019   | 19-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EK040T)<br>CS02,<br>CS07,                                   | CS04,<br>FD02                                    | 22-Jan-2019 | 25-Jan-2019              | 19-Feb-2019        | ✓          |  | 30-Jan-2019   | 19-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EK040T)<br>TP05_0.1,<br>TP09_0.1,                           | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 25-Jan-2019              | 20-Feb-2019        | ✓          |  | 30-Jan-2019   | 20-Feb-2019      | ✓          |
| EP066: Polychlorinated Biphenyls (PCB)                                                    |                                                  |             |                          |                    |            |  |               |                  |            |
| Soil Glass Jar - Unpreserved (EP066-EM)<br>TP04_0.2,<br>CS04,<br>FD02                     | CS02,<br>CS07,                                   | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          |  | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP066)<br>TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          |  | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP066-EM)<br>TP05_0.1,<br>TP09_0.1,                         | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 25-Jan-2019              | 06-Feb-2019        | ✓          |  | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP066)<br>TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 30-Jan-2019              | 06-Feb-2019        | ✓          |  | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| EP068A: Organochlorine Pesticides (OC)                                                    |                                                  |             |                          |                    |            |  |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)<br>TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          |  | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP068)<br>TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 30-Jan-2019              | 06-Feb-2019        | ✓          |  | 30-Jan-2019   | 11-Mar-2019      | ✓          |



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                            |                                                  | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|---------------------------------------------------|--------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                   |                                                  |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP068B: Organophosphorus Pesticides (OP)          |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP068)              |                                                  |             |                          |                    |            |               |                  |            |
| TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP068)              |                                                  |             |                          |                    |            |               |                  |            |
| TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 30-Jan-2019              | 06-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| EP074A: Monocyclic Aromatic Hydrocarbons          |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP074-UT)           |                                                  |             |                          |                    |            |               |                  |            |
| TP04_0.2,<br>CS04,<br>FD02                        | CS02,<br>CS07,                                   | 22-Jan-2019 | 24-Jan-2019              | 29-Jan-2019        | ✓          | 25-Jan-2019   | 29-Jan-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP074-UT)           |                                                  |             |                          |                    |            |               |                  |            |
| TP05_0.1,<br>TP09_0.1,                            | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 24-Jan-2019              | 30-Jan-2019        | ✓          | 25-Jan-2019   | 30-Jan-2019      | ✓          |
| EP074H: Naphthalene                               |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP074-UT)           |                                                  |             |                          |                    |            |               |                  |            |
| TP04_0.2,<br>CS04,<br>FD02                        | CS02,<br>CS07,                                   | 22-Jan-2019 | 24-Jan-2019              | 29-Jan-2019        | ✓          | 25-Jan-2019   | 29-Jan-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP074-UT)           |                                                  |             |                          |                    |            |               |                  |            |
| TP05_0.1,<br>TP09_0.1,                            | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 24-Jan-2019              | 30-Jan-2019        | ✓          | 25-Jan-2019   | 30-Jan-2019      | ✓          |
| EP074I: Volatile Halogenated Compounds            |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP074-UT)           |                                                  |             |                          |                    |            |               |                  |            |
| TP04_0.2,<br>CS04,<br>FD02                        | CS02,<br>CS07,                                   | 22-Jan-2019 | 24-Jan-2019              | 29-Jan-2019        | ✓          | 25-Jan-2019   | 29-Jan-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP074-UT)           |                                                  |             |                          |                    |            |               |                  |            |
| TP05_0.1,<br>TP09_0.1,                            | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 24-Jan-2019              | 30-Jan-2019        | ✓          | 25-Jan-2019   | 30-Jan-2019      | ✓          |
| EP075(SIM)A: Phenolic Compounds                   |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075(SIM))         |                                                  |             |                          |                    |            |               |                  |            |
| TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP075(SIM))         |                                                  |             |                          |                    |            |               |                  |            |
| TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 30-Jan-2019              | 06-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |



Matrix: **SOIL**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

| Method                                                                             |                                      | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|------------------------------------------------------------------------------------|--------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                    |                                      |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP075(SIM)B: Polynuclear Aromatic Hydrocarbons                                     |                                      |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075(SIM))<br>TP01_0.5, TP02_0.5, CS01, CS05, CS08, | TP02_0.1, TP03_0.1, CS03, CS06, FD01 | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP075(SIM))<br>TP06_0.1,                             | TP07_0.1                             | 23-Jan-2019 | 30-Jan-2019              | 06-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| EP075A: Phenolic Compounds (Halogenated)                                           |                                      |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP04_0.2, CS04, FD02                    | CS02, CS07,                          | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP05_0.1, TP09_0.1,                     | TP08_0.1, FD03                       | 23-Jan-2019 | 25-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| EP075A: Phenolic Compounds (Non-halogenated)                                       |                                      |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP04_0.2, CS04, FD02                    | CS02, CS07,                          | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP05_0.1, TP09_0.1,                     | TP08_0.1, FD03                       | 23-Jan-2019 | 25-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| EP075B: Polynuclear Aromatic Hydrocarbons                                          |                                      |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP04_0.2, CS04, FD02                    | CS02, CS07,                          | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP05_0.1, TP09_0.1,                     | TP08_0.1, FD03                       | 23-Jan-2019 | 25-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| EP075I: Organochlorine Pesticides                                                  |                                      |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP04_0.2, CS04, FD02                    | CS02, CS07,                          | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP075-EM)<br>TP05_0.1, TP09_0.1,                     | TP08_0.1, FD03                       | 23-Jan-2019 | 25-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |





Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                                                                    |                                                  | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-------------------------------------------------------------------------------------------|--------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                           |                                                  |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080/071: Total Petroleum Hydrocarbons                                                   |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP074-UT)<br>TP04_0.2,<br>CS04,<br>FD02                     | CS02,<br>CS07,                                   | 22-Jan-2019 | 24-Jan-2019              | 29-Jan-2019        | ✓          | 25-Jan-2019   | 29-Jan-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP080)<br>TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 24-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071-EM)<br>TP04_0.2,<br>CS04,<br>FD02                     | CS02,<br>CS07,                                   | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071)<br>TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP074-UT)<br>TP05_0.1,<br>TP09_0.1,                         | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 24-Jan-2019              | 30-Jan-2019        | ✓          | 25-Jan-2019   | 30-Jan-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP080)<br>TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 24-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071-EM)<br>TP05_0.1,<br>TP09_0.1,                         | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 25-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071)<br>TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 30-Jan-2019              | 06-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |



Matrix: **SOIL**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

| Method                                                                                    |                                                  | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-------------------------------------------------------------------------------------------|--------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                           |                                                  |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions                           |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP074-UT)<br>TP04_0.2,<br>CS04,<br>FD02                     | CS02,<br>CS07,                                   | 22-Jan-2019 | 24-Jan-2019              | 29-Jan-2019        | ✓          | 25-Jan-2019   | 29-Jan-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP080)<br>TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 24-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071-EM)<br>TP04_0.2,<br>CS04,<br>FD02                     | CS02,<br>CS07,                                   | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071)<br>TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP074-UT)<br>TP05_0.1,<br>TP09_0.1,                         | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 24-Jan-2019              | 30-Jan-2019        | ✓          | 25-Jan-2019   | 30-Jan-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP080)<br>TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 24-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071-EM)<br>TP05_0.1,<br>TP09_0.1,                         | TP08_0.1,<br>FD03                                | 23-Jan-2019 | 25-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071)<br>TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 30-Jan-2019              | 06-Feb-2019        | ✓          | 30-Jan-2019   | 11-Mar-2019      | ✓          |
| EP080: BTEXN                                                                              |                                                  |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)<br>TP01_0.5,<br>TP02_0.5,<br>CS01,<br>CS05,<br>CS08, | TP02_0.1,<br>TP03_0.1,<br>CS03,<br>CS06,<br>FD01 | 22-Jan-2019 | 24-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP080)<br>TP06_0.1,                                         | TP07_0.1                                         | 23-Jan-2019 | 24-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Feb-2019      | ✓          |

Matrix: **WATER**

Evaluation: \* = Holding time breach ; ✓ = Within holding time.

| Method<br>Container / Client Sample ID(s) | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
|                                           |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                                          | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-----------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                 |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080/071: Total Petroleum Hydrocarbons                         |             |                          |                    |            |               |                  |            |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>TB01                  | 22-Jan-2019 | 29-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>TB02                  | 23-Jan-2019 | 29-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Feb-2019      | ✓          |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions |             |                          |                    |            |               |                  |            |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>TB01                  | 22-Jan-2019 | 29-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>TB02                  | 23-Jan-2019 | 29-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Feb-2019      | ✓          |
| EP080: BTEXN                                                    |             |                          |                    |            |               |                  |            |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>TB01                  | 22-Jan-2019 | 29-Jan-2019              | 05-Feb-2019        | ✓          | 29-Jan-2019   | 05-Feb-2019      | ✓          |
| Amber VOC Vial - Sulfuric Acid (EP080)<br>TB02                  | 23-Jan-2019 | 29-Jan-2019              | 06-Feb-2019        | ✓          | 29-Jan-2019   | 06-Feb-2019      | ✓          |



## 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)                             |            |       |         |          |          |                               |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 4     | 35      | 11.43    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Moisture Content                                        | EA055      | 3     | 30      | 10.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 2     | 17      | 11.76    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PCB - VIC EPA 448.3 Screen                              | EP066-EM   | 2     | 19      | 10.53    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 2     | 14      | 14.29    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| pH in soil using a 0.01M CaCl2 extract                  | EA001      | 6     | 60      | 10.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 2     | 14      | 14.29    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Semivolatile Organic Compounds - Waste Classification   | EP075-EM   | 2     | 19      | 10.53    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Cyanide by Segmented Flow Analyser                | EK026SF    | 4     | 32      | 12.50    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Fluoride                                          | EK040T     | 4     | 40      | 10.00    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 2     | 17      | 11.76    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES                                 | EG005T     | 2     | 17      | 11.76    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071      | 2     | 16      | 12.50    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071-EM   | 2     | 19      | 10.53    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                      | EP080      | 2     | 19      | 10.53    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Volatile Organic Compounds - Ultra-trace                | EP074-UT   | 1     | 9       | 11.11    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Laboratory Control Samples (LCS)                        |            |       |         |          |          |                               |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 4     | 35      | 11.43    | 10.00    | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 1     | 17      | 5.88     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PCB - VIC EPA 448.3 Screen                              | EP066-EM   | 1     | 19      | 5.26     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 1     | 14      | 7.14     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 1     | 14      | 7.14     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Semivolatile Organic Compounds - Waste Classification   | EP075-EM   | 1     | 19      | 5.26     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Cyanide by Segmented Flow Analyser                | EK026SF    | 2     | 32      | 6.25     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Fluoride                                          | EK040T     | 2     | 40      | 5.00     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 1     | 17      | 5.88     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES                                 | EG005T     | 1     | 17      | 5.88     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071      | 1     | 16      | 6.25     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071-EM   | 1     | 19      | 5.26     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                      | EP080      | 1     | 19      | 5.26     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Volatile Organic Compounds - Ultra-trace                | EP074-UT   | 1     | 9       | 11.11    | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Method Blanks (MB)                                      |            |       |         |          |          |                               |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 2     | 35      | 5.71     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 1     | 17      | 5.88     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| PCB - VIC EPA 448.3 Screen                              | EP066-EM   | 1     | 19      | 5.26     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 1     | 14      | 7.14     | 5.00     | ✓                             | NEPM 2013 B3 & ALS QC Standard |





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 |                                |
| Method Blanks (MB) - Continued                          |            |       |         |          |          |            |                                |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 1     | 14      | 7.14     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Semivolatile Organic Compounds - Waste Classification   | EP075-EM   | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Cyanide by Segmented Flow Analyser                | EK026SF    | 2     | 32      | 6.25     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Fluoride                                          | EK040T     | 2     | 40      | 5.00     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 1     | 17      | 5.88     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES                                 | EG005T     | 1     | 17      | 5.88     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071      | 1     | 16      | 6.25     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071-EM   | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                      | EP080      | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Volatile Organic Compounds - Ultra-trace                | EP074-UT   | 1     | 9       | 11.11    | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Matrix Spikes (MS)                                      |            |       |         |          |          |            |                                |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G     | 2     | 35      | 5.71     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM)                                       | EP075(SIM) | 1     | 17      | 5.88     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| PCB - VIC EPA 448.3 Screen                              | EP066-EM   | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS                                      | EP068      | 1     | 14      | 7.14     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB)                         | EP066      | 1     | 14      | 7.14     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Semivolatile Organic Compounds - Waste Classification   | EP075-EM   | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Cyanide by Segmented Flow Analyser                | EK026SF    | 2     | 32      | 6.25     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Fluoride                                          | EK040T     | 2     | 40      | 5.00     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS                                   | EG035T     | 1     | 17      | 5.88     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES                                 | EG005T     | 1     | 17      | 5.88     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071      | 1     | 16      | 6.25     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                             | EP071-EM   | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                      | EP080      | 1     | 19      | 5.26     | 5.00     | ✔          | NEPM 2013 B3 & ALS QC Standard |
| Volatile Organic Compounds - Ultra-trace                | EP074-UT   | 1     | 9       | 11.11    | 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)      |        |       |         |          |          |            |                                |
| TRH Volatiles/BTEX               | EP080  | 1     | 10      | 10.00    | 10.00    | ✓          | NEPM 2013 B3 & ALS QC Standard |
| Laboratory Control Samples (LCS) |        |       |         |          |          |            |                                |
| TRH Volatiles/BTEX               | EP080  | 1     | 10      | 10.00    | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| Method Blanks (MB)               |        |       |         |          |          |            |                                |
| TRH Volatiles/BTEX               | EP080  | 1     | 10      | 10.00    | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| Matrix Spikes (MS)               |        |       |         |          |          |            |                                |
| TRH Volatiles/BTEX               | EP080  | 1     | 10      | 10.00    | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------|----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pH in soil using a 0.01M CaCl <sub>2</sub> extract      | EA001    | SOIL   | In house: Referenced to Rayment and Lyons (2011) 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl <sub>2</sub> and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM (2013) Schedule B(3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 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 7.1 and Table 1 (14 day holding time).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Asbestos Identification in Soils                        | EA200    | SOIL   | AS 4964 - 2004 Method for the qualitative identification of asbestos in bulk samples<br>Analysis by Polarised Light Microscopy including dispersion staining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Total Metals by ICP-AES                                 | EG005T   | SOIL   | In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Total Mercury by FIMS                                   | EG035T   | SOIL   | In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl <sub>2</sub> ) (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 SnCl <sub>2</sub> 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)                                                                                                                                                                                                                                                                                                                                                            |
| Hexavalent Chromium by Alkaline Digestion and DA Finish | EG048G   | SOIL   | In house: Referenced to USEPA SW846, Method 3060A. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Total Cyanide by Segmented Flow Analyser                | EK026SF  | SOIL   | In house: Referenced to APHA 4500-CN C / ASTM D7511. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Complex bound cyanide is decomposed in a continuously flowing stream, at a pH of 3.8, by the effect of UV light. A UV-B lamp (312 nm) and a decomposition spiral of borosilicate glass are used to filter out UV light with a wavelength of less than 290 nm thus preventing the conversion of thiocyanate into cyanide. The hydrogen cyanide present at a pH of 3.8 is separated by gas dialysis. The hydrogen cyanide is then determined photometrically, based on the reaction of cyanide with chloramine-T to form cyanogen chloride. This then reacts with 4-pyridine carboxylic acid and 1,3-dimethylbarbituric acid to give a red colour which is measured at 600 nm. This method is compliant with NEPM (2013) Schedule B(3) |
| Total Fluoride                                          | EK040T   | SOIL   | (In-house) Total fluoride is determined by ion specific electrode (ISE) in a solution obtained after a Sodium Carbonate / Potassium Carbonate fusion dissolution.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Polychlorinated Biphenyls (PCB)                         | EP066    | SOIL   | In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| PCB - VIC EPA 448.3 Screen                              | EP066-EM | SOIL   | In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |



| Analytical Methods                                    | Method       | Matrix | Method Descriptions                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------|--------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pesticides by GCMS                                    | EP068        | SOIL   | In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)                                                                                                                                                          |
| TRH - Semivolatile Fraction                           | EP071        | SOIL   | In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.                                                                                                                                                                                                                |
| TRH - Semivolatile Fraction                           | EP071-EM     | SOIL   | In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40.                                                                                                                                                                                                                                                  |
| Volatile Organic Compounds - Ultra-trace              | EP074-UT     | SOIL   | In house: Referenced to USEPA SW 846 - 8260B Extracts are analysed by Purge and Trap, Capillary GC/MS in partial SIM/Scan mode. Quantification is by comparison against an established multi-point calibration curves. This method is compliant with NEPM (2013) Schedule B(3) (Method 501)                                                                                                                      |
| Volatile Organic Compounds - Ultra-trace - Summations | EP074-UT-SUM | SOIL   | Summation of MAHs and VHCs                                                                                                                                                                                                                                                                                                                                                                                       |
| 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)                                                                                                                            |
| Semivolatile Organic Compounds - Waste Classification | EP075-EM     | SOIL   | In house: Referenced to USEPA SW 846 - 8270D Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 502)                                                                                                                                                              |
| SVOC - Waste Classification (Sums)                    | EP075-EM-SUM | SOIL   | Summations for EP075 (EM variation)                                                                                                                                                                                                                                                                                                                                                                              |
| TRH Volatiles/BTEX                                    | EP080        | SOIL   | In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.                                                                                                                                                                                      |
| TRH Volatiles/BTEX                                    | EP080        | WATER  | In house: Referenced to USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3) |

| Preparation Methods                                        | Method    | Matrix | Method Descriptions                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NaOH leach for CN in Soils                                 | CN-PR     | SOIL   | In house: APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.                                                                                                                                                                                                                                                                                                                                       |
| pH in soil using a 0.01M CaCl2 extract                     | EA001-PR  | SOIL   | In house: Referenced to Rayment and Higginson 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM (2013) Schedule B(3) (Method 103)                                                                                                                                                             |
| Alkaline digestion for Hexavalent Chromium                 | EG048PR   | SOIL   | In house: Referenced to USEPA SW846, Method 3060A.                                                                                                                                                                                                                                                                                                                                                                      |
| Total Fluoride                                             | EK040T-PR | SOIL   | In house: Samples are fused with Sodium Carbonate / Potassium Carbonate flux.                                                                                                                                                                                                                                                                                                                                           |
| 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) |
| Methanolic Extraction of Soils for Purge and Trap          | ORG16     | SOIL   | In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.                                                                                                                                                                                                                                                                       |



| <i>Preparation Methods</i>                    | <i>Method</i> | <i>Matrix</i> | <i>Method Descriptions</i>                                                                                                                                                                                                                                              |
|-----------------------------------------------|---------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Methanolic Extraction of Soils - Ultra-trace. | ORG16-UT      | SOIL          | In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.                                                                                                                       |
| Tumbler Extraction of Solids                  | ORG17         | SOIL          | In house: Mechanical agitation (tumbler). 10g of sample, Na <sub>2</sub> SO <sub>4</sub> 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. |
| Tumbler Extraction of Solids - VIC EPA Screen | ORG17-EM      | SOIL          | In house: Mechanical agitation (tumbler). 10g of sample, Na <sub>2</sub> SO <sub>4</sub> 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. |
| Volatiles Water Preparation                   | ORG16-W       | WATER         | A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.                                                                                                                                                                                   |



## CERTIFICATE OF ANALYSIS

**Work Order** : **EM1901343**  
**Client** : **GHD PTY LTD**  
**Contact** : **KORY AUCH**  
**Address** : **LEVEL 8, 180 LONSDALE ST**  
**MELBOURNE VIC, AUSTRALIA 3001**  
**Telephone** : **----**  
**Project** : **3136558**  
**Order number** : **----**  
**C-O-C number** : **----**  
**Sampler** : **----**  
**Site** : **Wonthaggi PSP - Targeted Intrusive Investigation**  
**Quote number** : **EN/005/18**  
**No. of samples received** : **5**  
**No. of samples analysed** : **5**

**Page** : 1 of 5  
**Laboratory** : Environmental Division Melbourne  
**Contact** : Shirley LeCornu  
**Address** : 4 Westall Rd Springvale VIC Australia 3171  
**Telephone** : +6138549 9630  
**Date Samples Received** : 23-Jan-2019 12:50  
**Date Analysis Commenced** : 24-Jan-2019  
**Issue Date** : 06-Feb-2019 16:17



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                |
|-------------------|-------------------------------------|---------------------------------------|
| Nikki Stepniewski | Senior Inorganic Instrument Chemist | Melbourne Inorganics, Springvale, VIC |
| Xing Lin          | Senior Organic Chemist              | Melbourne Organics, Springvale, VIC   |



## 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.

- This is a rebatch of EM1900929.



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)                                                         |                   |     |       | Client sample ID | TP01_1.0          | TP07_0.1          | TP08_0.1          | TP09_0.1          | CS04              |
|--------------------------------------------------------------------------------------------|-------------------|-----|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time                                                                |                   |     |       |                  | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 |
| Compound                                                                                   | CAS Number        | LOR | Unit  |                  | EM1901343-001     | EM1901343-002     | EM1901343-003     | EM1901343-004     | EM1901343-005     |
|                                                                                            |                   |     |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EA055: Moisture Content (Dried @ 105-110°C)</b>                                         |                   |     |       |                  |                   |                   |                   |                   |                   |
| Moisture Content                                                                           | ----              | 1.0 | %     |                  | 16.7              | ----              | ----              | ----              | ----              |
| <b>EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup</b>                         |                   |     |       |                  |                   |                   |                   |                   |                   |
| C10 - C14 Fraction                                                                         | ----              | 50  | mg/kg |                  | ----              | <50               | <50               | <50               | <50               |
| C15 - C28 Fraction                                                                         | ----              | 100 | mg/kg |                  | ----              | <100              | <100              | <100              | <100              |
| C29 - C36 Fraction                                                                         | ----              | 100 | mg/kg |                  | ----              | <100              | <100              | <100              | <100              |
| C10 - C36 Fraction (sum)                                                                   | ----              | 50  | mg/kg |                  | ----              | <50               | <50               | <50               | <50               |
| <b>EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup</b> |                   |     |       |                  |                   |                   |                   |                   |                   |
| >C10 - C16 Fraction                                                                        | ----              | 50  | mg/kg |                  | ----              | <50               | <50               | <50               | <50               |
| >C16 - C34 Fraction                                                                        | ----              | 100 | mg/kg |                  | ----              | <100              | <100              | <100              | <100              |
| >C34 - C40 Fraction                                                                        | ----              | 100 | mg/kg |                  | ----              | <100              | <100              | <100              | <100              |
| >C10 - C40 Fraction (sum)                                                                  | ----              | 50  | mg/kg |                  | ----              | <50               | <50               | <50               | <50               |
| <b>EP080/071: Total Petroleum Hydrocarbons</b>                                             |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C9 Fraction                                                                           | ----              | 10  | mg/kg |                  | <10               | ----              | ----              | ----              | ----              |
| C10 - C14 Fraction                                                                         | ----              | 50  | mg/kg |                  | <50               | ----              | ----              | ----              | ----              |
| C15 - C28 Fraction                                                                         | ----              | 100 | mg/kg |                  | <100              | ----              | ----              | ----              | ----              |
| C29 - C36 Fraction                                                                         | ----              | 100 | mg/kg |                  | <100              | ----              | ----              | ----              | ----              |
| ^ C10 - C36 Fraction (sum)                                                                 | ----              | 50  | mg/kg |                  | <50               | ----              | ----              | ----              | ----              |
| <b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>                     |                   |     |       |                  |                   |                   |                   |                   |                   |
| C6 - C10 Fraction                                                                          | C6_C10            | 10  | mg/kg |                  | <10               | ----              | ----              | ----              | ----              |
| ^ C6 - C10 Fraction minus BTEX (F1)                                                        | C6_C10-BTEX       | 10  | mg/kg |                  | <10               | ----              | ----              | ----              | ----              |
| >C10 - C16 Fraction                                                                        | ----              | 50  | mg/kg |                  | <50               | ----              | ----              | ----              | ----              |
| >C16 - C34 Fraction                                                                        | ----              | 100 | mg/kg |                  | <100              | ----              | ----              | ----              | ----              |
| >C34 - C40 Fraction                                                                        | ----              | 100 | mg/kg |                  | <100              | ----              | ----              | ----              | ----              |
| ^ >C10 - C40 Fraction (sum)                                                                | ----              | 50  | mg/kg |                  | <50               | ----              | ----              | ----              | ----              |
| ^ >C10 - C16 Fraction minus Naphthalene (F2)                                               | ----              | 50  | mg/kg |                  | <50               | ----              | ----              | ----              | ----              |
| <b>EP080: BTEXN</b>                                                                        |                   |     |       |                  |                   |                   |                   |                   |                   |
| Benzene                                                                                    | 71-43-2           | 0.2 | mg/kg |                  | <0.2              | ----              | ----              | ----              | ----              |
| Toluene                                                                                    | 108-88-3          | 0.5 | mg/kg |                  | <0.5              | ----              | ----              | ----              | ----              |
| Ethylbenzene                                                                               | 100-41-4          | 0.5 | mg/kg |                  | <0.5              | ----              | ----              | ----              | ----              |
| meta- & para-Xylene                                                                        | 108-38-3 106-42-3 | 0.5 | mg/kg |                  | <0.5              | ----              | ----              | ----              | ----              |
| ortho-Xylene                                                                               | 95-47-6           | 0.5 | mg/kg |                  | <0.5              | ----              | ----              | ----              | ----              |
| ^ Sum of BTEX                                                                              | ----              | 0.2 | mg/kg |                  | <0.2              | ----              | ----              | ----              | ----              |



## Analytical Results

| Sub-Matrix: SOIL<br>(Matrix: SOIL)    |            |     |       | Client sample ID | TP01_1.0          | TP07_0.1          | TP08_0.1          | TP09_0.1          | CS04              |
|---------------------------------------|------------|-----|-------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Client sampling date / time           |            |     |       |                  | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 | 22-Jan-2019 00:00 |
| Compound                              | CAS Number | LOR | Unit  |                  | EM1901343-001     | EM1901343-002     | EM1901343-003     | EM1901343-004     | EM1901343-005     |
|                                       |            |     |       |                  | Result            | Result            | Result            | Result            | Result            |
| <b>EP080: BTEXN - Continued</b>       |            |     |       |                  |                   |                   |                   |                   |                   |
| ^ Total Xylenes                       | ----       | 0.5 | mg/kg |                  | <0.5              | ----              | ----              | ----              | ----              |
| Naphthalene                           | 91-20-3    | 1   | mg/kg |                  | <1                | ----              | ----              | ----              | ----              |
| <b>EP080S: TPH(V)/BTEX Surrogates</b> |            |     |       |                  |                   |                   |                   |                   |                   |
| 1,2-Dichloroethane-D4                 | 17060-07-0 | 0.2 | %     |                  | 78.5              | ----              | ----              | ----              | ----              |
| Toluene-D8                            | 2037-26-5  | 0.2 | %     |                  | 75.7              | ----              | ----              | ----              | ----              |
| 4-Bromofluorobenzene                  | 460-00-4   | 0.2 | %     |                  | 84.2              | ----              | ----              | ----              | ----              |



## Surrogate Control Limits

| Sub-Matrix: SOIL               |            | Recovery Limits (%) |      |
|--------------------------------|------------|---------------------|------|
| Compound                       | CAS Number | Low                 | High |
| EP080S: TPH(V)/BTEX Surrogates |            |                     |      |
| 1,2-Dichloroethane-D4          | 17060-07-0 | 51                  | 125  |
| Toluene-D8                     | 2037-26-5  | 55                  | 125  |
| 4-Bromofluorobenzene           | 460-00-4   | 56                  | 124  |



## SAMPLE RECEIPT NOTIFICATION (SRN)

**Work Order : EM1901343**

|                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Client : <b>GHD PTY LTD</b></p> <p>Contact : KORY AUCH</p> <p>Address : LEVEL 8, 180 LONSDALE ST<br/>MELBOURNE VIC, AUSTRALIA 3001</p> <p>E-mail : kory.auch@ghd.com</p> <p>Telephone : ----</p> <p>Facsimile : ----</p> <p>Project : 3136558</p> <p>Order number : </p> <p>C-O-C number : ----</p> <p>Site : Wonthaggi PSP - Targeted Intrusive Investigation</p> <p>Sampler : </p> | <p>Laboratory : Environmental Division Melbourne</p> <p>Contact : Shirley LeCornu</p> <p>Address : 4 Westall Rd Springvale VIC Australia 3171</p> <p>E-mail : shirley.lecornu@Alsglobal.com</p> <p>Telephone : +6138549 9630</p> <p>Facsimile : +61-3-8549 9626</p> <p>Page : 1 of 2</p> <p>Quote number : ES2018GHDSE0025 (EN/005/18)</p> <p>QC Level : NEPM 2013 B3 &amp; ALS QC Standard</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### *Dates*

|                                           |                                               |
|-------------------------------------------|-----------------------------------------------|
| Date Samples Received : 23-Jan-2019 12:50 | Issue Date : 01-Feb-2019                      |
| Client Requested Due Date : 08-Feb-2019   | Scheduled Reporting Date : <b>08-Feb-2019</b> |

### *Delivery Details*

|                                    |                                            |
|------------------------------------|--------------------------------------------|
| Mode of Delivery : Samples On Hand | Security Seal : Not Available              |
| No. of coolers/boxes : ----        | Temperature : ----                         |
| Receipt Detail :                   | No. of samples received / analysed : 5 / 5 |

### *General Comments*

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- This is a rebatch of EM1900929.

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

- ### Summary of Sample(s) and Requested Analysis

Matrix: SOIL

| Laboratory sample ID | Client sampling date / time | Client sample ID | SOIL - E Moisture | SOIL - E TRH - S | SOIL - T TRH (C) |
|----------------------|-----------------------------|------------------|-------------------|------------------|------------------|
| EM1901343-001        | 22-Jan-2019 00:00           | TP01_1.0         | ✓                 |                  | ✓                |
| EM1901343-002        | 22-Jan-2019 00:00           | TP07_0.1         |                   | ✓                |                  |
| EM1901343-003        | 22-Jan-2019 00:00           | TP08_0.1         |                   | ✓                |                  |
| EM1901343-004        | 22-Jan-2019 00:00           | TP09_0.1         |                   | ✓                |                  |
| EM1901343-005        | 22-Jan-2019 00:00           | CS04             |                   | ✓                |                  |

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

## ALL INVOICES

- Email            ap-fss@ghd.com

|                                                                |       |                       |
|----------------------------------------------------------------|-------|-----------------------|
| - *AU Certificate of Analysis - NATA (COA)                     | Email | ghdlabreports@ghd.com |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)    | Email | ghdlabreports@ghd.com |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)            | Email | ghdlabreports@ghd.com |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | ghdlabreports@ghd.com |
| - EDI Format - ESDAT (ESDAT)                                   | Email | ghdlabreports@ghd.com |
| - Electronic SRN for ESdat (ESRN_ ESDAT)                       | Email | ghdlabreports@ghd.com |

|                                                                |       |                   |
|----------------------------------------------------------------|-------|-------------------|
| - *AU Certificate of Analysis - NATA (COA)                     | Email | kory.auch@ghd.com |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)    | Email | kory.auch@ghd.com |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)            | Email | kory.auch@ghd.com |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | kory.auch@ghd.com |
| - A4 - AU Tax Invoice (INV)                                    | Email | kory.auch@ghd.com |
| - Chain of Custody (CoC) (COC)                                 | Email | kory.auch@ghd.com |
| - EDI Format - ENMRG (ENMRG)                                   | Email | kory.auch@ghd.com |
| - EDI Format - ESDAT (ESDAT)                                   | Email | kory.auch@ghd.com |
| - Electronic SRN for ESdat (ESRN ESDAT)                        | Email | kory.auch@ghd.com |

## Shirley LeCornu

---

**Subject:** FW: RESULTS & EDD & INVOICE for ALS Workorder : EM1900929 | Overall Description: Wonthaggi PSP - Targeted Intrusive Investigation

**Attachments:** EM1900929\_COC(1).pdf

Please re-batch as per below

**Shirley LeCornu**  
Client Services Coordinator – Springvale  
Environmental



T +61 3 8549 9600 D +61 3 8549 9630  
F +61 3 8549 9626  
[Shirley.lecornu@alsglobal.com](mailto:Shirley.lecornu@alsglobal.com)  
2-4 Westall Rd  
Springvale Vic 3171  
Australia

EnviroMail™ 122 – TEG in Air and Vapour  
EnviroMail™ 123 – Leaching Environmental Assessment Framework



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[www.alsglobal.com](http://www.alsglobal.com)

**From:** Kory.Auch@ghd.com [mailto:Kory.Auch@ghd.com]

**Sent:** Friday, 1 February 2019 3:25 PM

**To:** Shirley LeCornu <[shirley.lecornu@alsglobal.com](mailto:shirley.lecornu@alsglobal.com)>

**Subject:** RE: RESULTS & EDD & INVOICE for ALS Workorder : EM1900929 | Overall Description: Wonthaggi PSP - Targeted Intrusive Investigation

Hi Shirley,

Can you help me arrange some secondary analysis as listed below?

Received 23/1 @ 12:50pm

Environmental Division  
Melbourne  
Work Order Reference  
**EM1901343**



Telephone : +61-3-8549 9800  
**MS 363**

Project 3136558

1  
2  
3  
4  
5

| COC sample # | Sample ID | Analysis                          | Tray        | Sample date |
|--------------|-----------|-----------------------------------|-------------|-------------|
| 2            | TP01_1.0  | TRH (C6-C40)                      | HS106-7     | 22/1/2019   |
| 18           | TP07_0.1  | TRH (C6-C40) - Silica Gel Cleanup | Use extract | 22/1/2019   |
| 21           | TP08_0.1  | TRH (C6-C40) - Silica Gel Cleanup | Use extract | 22/1/2019   |
| 25           | TP09_0.1  | TRH (C6-C40) - Silica Gel Cleanup | Use extract | 22/1/2019   |
| 31           | CS04      | TRH (C6-C40) - Silica Gel Cleanup | Use extract | 22/1/2019   |

Let me know if there are any issues.

Thanks,

**Kory Auch**

**GHD**

T: 03 8687 8948 | V: 318948 | M: 0478 797 000 | E: [kory.auch@ghd.com](mailto:kory.auch@ghd.com)

**From:** [angel-no-reply@alsglobal.com](mailto:angel-no-reply@alsglobal.com) <[angel-no-reply@alsglobal.com](mailto:angel-no-reply@alsglobal.com)>

**Sent:** Friday, 1 February 2019 12:19 PM

**To:** Kory Auch <[Kory.Auch@ghd.com](mailto:Kory.Auch@ghd.com)>

**Subject:** RESULTS & EDD & INVOICE for ALS Workorder : EM1900929 | Overall Description: Wonthaggi PSP - Targeted Intrusive Investigation



## **Deliverables for ALS Workorder EM1900929**

**Project: 3136558**

**Overall Description: Wonthaggi PSP - Targeted  
Intrusive Investigation**

Dear KORY AUCH,

Please find enclosed the following deliverables for **EM1900929**:

- 3136558.ESDAT\_EM1900929\_0.Chemistry2e.CSV
- 3136558.ESDAT\_EM1900929\_0.Header.XML
- 3136558.ESDAT\_EM1900929\_0.Sample2e.CSV
- EM1900929\_0\_COA.pdf
- EM1900929\_0\_ENMRG.CSV
- EM1900929\_0\_QC.pdf

## QUALITY CONTROL REPORT

|                                |                                                                     |                                |                                                     |
|--------------------------------|---------------------------------------------------------------------|--------------------------------|-----------------------------------------------------|
| <b>Work Order</b>              | <b>: EM1901343</b>                                                  | <b>Page</b>                    | <b>: 1 of 5</b>                                     |
| <b>Client</b>                  | <b>: GHD PTY LTD</b>                                                | <b>Laboratory</b>              | <b>: Environmental Division Melbourne</b>           |
| <b>Contact</b>                 | <b>: KORY AUCH</b>                                                  | <b>Contact</b>                 | <b>: Shirley LeCornu</b>                            |
| <b>Address</b>                 | <b>: LEVEL 8, 180 LONSDALE ST<br/>MELBOURNE VIC, AUSTRALIA 3001</b> | <b>Address</b>                 | <b>: 4 Westall Rd Springvale VIC Australia 3171</b> |
| <b>Telephone</b>               | <b>: ----</b>                                                       | <b>Telephone</b>               | <b>: +6138549 9630</b>                              |
| <b>Project</b>                 | <b>: 3136558</b>                                                    | <b>Date Samples Received</b>   | <b>: 23-Jan-2019</b>                                |
| <b>Order number</b>            | <b>: ----</b>                                                       | <b>Date Analysis Commenced</b> | <b>: 24-Jan-2019</b>                                |
| <b>C-O-C number</b>            | <b>: ----</b>                                                       | <b>Issue Date</b>              | <b>: 06-Feb-2019</b>                                |
| <b>Sampler</b>                 | <b>: ----</b>                                                       |                                |                                                     |
| <b>Site</b>                    | <b>: Wonthaggi PSP - Targeted Intrusive Investigation</b>           |                                |                                                     |
| <b>Quote number</b>            | <b>: EN/005/18</b>                                                  |                                |                                                     |
| <b>No. of samples received</b> | <b>: 5</b>                                                          |                                |                                                     |
| <b>No. of samples analysed</b> | <b>: 5</b>                                                          |                                |                                                     |



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.

| <i>Signatories</i> | <i>Position</i>                     | <i>Accreditation Category</i>         |
|--------------------|-------------------------------------|---------------------------------------|
| Nikki Stepniewski  | Senior Inorganic Instrument Chemist | Melbourne Inorganics, Springvale, VIC |
| Xing Lin           | Senior Organic Chemist              | Melbourne Organics, Springvale, VIC   |





## 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**

| 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: 2167727)                     |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1901332-010                                                                     | Anonymous        | EA055: Moisture Content          | ----                 | 0.1                               | %     | 13.5            | 15.0             | 10.0    | 0% - 50%            |
| EM1901349-001                                                                     | Anonymous        | EA055: Moisture Content          | ----                 | 0.1                               | %     | 6.9             | 10.0             | 37.6    | 0% - 50%            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2167449)                         |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1901317-001                                                                     | Anonymous        | EP080: C6 - C9 Fraction          | ----                 | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1901349-003                                                                     | Anonymous        | EP080: C6 - C9 Fraction          | ----                 | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2169852)                         |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1901343-001                                                                     | TP01_1.0         | EP071: C15 - C28 Fraction        | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C29 - C36 Fraction        | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C14 Fraction        | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: C10 - C36 Fraction (sum)  | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2167449) |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1901317-001                                                                     | Anonymous        | EP080: C6 - C10 Fraction         | C6_C10               | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EM1901349-003                                                                     | Anonymous        | EP080: C6 - C10 Fraction         | C6_C10               | 10                                | mg/kg | <10             | <10              | 0.00    | No Limit            |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2169852) |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1901343-001                                                                     | TP01_1.0         | EP071: >C16 - C34 Fraction       | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: >C34 - C40 Fraction       | ----                 | 100                               | mg/kg | <100            | <100             | 0.00    | No Limit            |
|                                                                                   |                  | EP071: >C10 - C16 Fraction       | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
|                                                                                   |                  | EP071: >C10 - C40 Fraction (sum) | ----                 | 50                                | mg/kg | <50             | <50              | 0.00    | No Limit            |
| EP080: BTEXN (QC Lot: 2167449)                                                    |                  |                                  |                      |                                   |       |                 |                  |         |                     |
| EM1901317-001                                                                     | Anonymous        | EP080: Benzene                   | 71-43-2              | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                                                   |                  | EP080: Toluene                   | 108-88-3             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                   |                  | EP080: Ethylbenzene              | 100-41-4             | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                                                   |                  | EP080: meta- & para-Xylene       | 108-38-3<br>106-42-3 | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |

Page : 3 of 5  
 Work Order : EM1901343  
 Client : GHD PTY LTD  
 Project : 3136558



| Sub-Matrix: <b>SOIL</b>                           |                  |                            |            | Laboratory Duplicate (DUP) Report |       |                 |                  |         |                     |
|---------------------------------------------------|------------------|----------------------------|------------|-----------------------------------|-------|-----------------|------------------|---------|---------------------|
| Laboratory sample ID                              | Client sample ID | Method: Compound           | CAS Number | LOR                               | Unit  | Original Result | Duplicate Result | RPD (%) | Recovery Limits (%) |
| <b>EP080: BTEXN (QC Lot: 2167449) - continued</b> |                  |                            |            |                                   |       |                 |                  |         |                     |
| EM1901317-001                                     | Anonymous        | EP080: ortho-Xylene        | 95-47-6    | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                   |                  | EP080: Naphthalene         | 91-20-3    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |
| EM1901349-003                                     | Anonymous        | EP080: Benzene             | 71-43-2    | 0.2                               | mg/kg | <0.2            | <0.2             | 0.00    | No Limit            |
|                                                   |                  | EP080: Toluene             | 108-88-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                   |                  | EP080: Ethylbenzene        | 100-41-4   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                   |                  | EP080: meta- & para-Xylene | 108-38-3   | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                   |                  |                            | 106-42-3   |                                   |       |                 |                  |         |                     |
|                                                   |                  | EP080: ortho-Xylene        | 95-47-6    | 0.5                               | mg/kg | <0.5            | <0.5             | 0.00    | No Limit            |
|                                                   |                  | EP080: Naphthalene         | 91-20-3    | 1                                 | mg/kg | <1              | <1               | 0.00    | No Limit            |



## 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**

| Sub-Matrix: SOIL                                                                                     |            |     |       | Method Blank (MB)<br>Report | Laboratory Control Spike (LCS) Report |                    |                     |      |
|------------------------------------------------------------------------------------------------------|------------|-----|-------|-----------------------------|---------------------------------------|--------------------|---------------------|------|
|                                                                                                      |            |     |       |                             | Spike<br>Concentration                | Spike Recovery (%) | Recovery Limits (%) |      |
| Method: Compound                                                                                     | CAS Number | LOR | Unit  | Result                      |                                       | LCS                | Low                 | High |
| EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup (QCLot: 2168445)                         |            |     |       |                             |                                       |                    |                     |      |
| EP071-SVSG: C10 - C14 Fraction                                                                       | ----       | 50  | mg/kg | <50                         | 806 mg/kg                             | 80.1               | 56                  | 122  |
| EP071-SVSG: C15 - C28 Fraction                                                                       | ----       | 100 | mg/kg | <100                        | 3006 mg/kg                            | 110                | 64                  | 135  |
| EP071-SVSG: C29 - C36 Fraction                                                                       | ----       | 100 | mg/kg | <100                        | 1584 mg/kg                            | 92.6               | 66                  | 120  |
| EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup (QCLot: 2168445) |            |     |       |                             |                                       |                    |                     |      |
| EP071-SVSG: >C10 - C16 Fraction                                                                      | ----       | 50  | mg/kg | <50                         | 1160 mg/kg                            | 86.7               | 62                  | 118  |
| EP071-SVSG: >C16 - C34 Fraction                                                                      | ----       | 100 | mg/kg | <100                        | 3978 mg/kg                            | 99.4               | 67                  | 126  |
| EP071-SVSG: >C34 - C40 Fraction                                                                      | ----       | 100 | mg/kg | <100                        | 313 mg/kg                             | 81.1               | 49                  | 128  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2167449)                                             |            |     |       |                             |                                       |                    |                     |      |
| EP080: C6 - C9 Fraction                                                                              | ----       | 10  | mg/kg | <10                         | 36 mg/kg                              | 123                | 61                  | 127  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2169852)                                             |            |     |       |                             |                                       |                    |                     |      |
| EP071: C10 - C14 Fraction                                                                            | ----       | 50  | mg/kg | <50                         | 806 mg/kg                             | 101                | 72                  | 122  |
| EP071: C15 - C28 Fraction                                                                            | ----       | 100 | mg/kg | <100                        | 3006 mg/kg                            | 108                | 84                  | 123  |
| EP071: C29 - C36 Fraction                                                                            | ----       | 100 | mg/kg | <100                        | 1584 mg/kg                            | 104                | 79                  | 119  |
| EP071: C10 - C36 Fraction (sum)                                                                      | ----       | 50  | mg/kg | <50                         | ----                                  | ----               | ----                | ---- |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2167449)                     |            |     |       |                             |                                       |                    |                     |      |
| EP080: C6 - C10 Fraction                                                                             | C6_C10     | 10  | mg/kg | <10                         | 45 mg/kg                              | 118                | 60                  | 125  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2169852)                     |            |     |       |                             |                                       |                    |                     |      |
| EP071: >C10 - C16 Fraction                                                                           | ----       | 50  | mg/kg | <50                         | 1160 mg/kg                            | 106                | 77                  | 121  |
| EP071: >C16 - C34 Fraction                                                                           | ----       | 100 | mg/kg | <100                        | 3978 mg/kg                            | 107                | 83                  | 121  |
| EP071: >C34 - C40 Fraction                                                                           | ----       | 100 | mg/kg | <100                        | 313 mg/kg                             | 90.1               | 65                  | 123  |
| EP071: >C10 - C40 Fraction (sum)                                                                     | ----       | 50  | mg/kg | <50                         | ----                                  | ----               | ----                | ---- |
| EP080: BTEXN (QCLot: 2167449)                                                                        |            |     |       |                             |                                       |                    |                     |      |
| EP080: Benzene                                                                                       | 71-43-2    | 0.2 | mg/kg | <0.2                        | 2 mg/kg                               | 114                | 63                  | 119  |
| EP080: Toluene                                                                                       | 108-88-3   | 0.5 | mg/kg | <0.5                        | 2 mg/kg                               | 125                | 67                  | 126  |
| EP080: Ethylbenzene                                                                                  | 100-41-4   | 0.5 | mg/kg | <0.5                        | 2 mg/kg                               | 101                | 66                  | 124  |
| EP080: meta- & para-Xylene                                                                           | 108-38-3   | 0.5 | mg/kg | <0.5                        | 4 mg/kg                               | 101                | 68                  | 128  |
|                                                                                                      | 106-42-3   |     |       |                             |                                       |                    |                     |      |
| EP080: ortho-Xylene                                                                                  | 95-47-6    | 0.5 | mg/kg | <0.5                        | 2 mg/kg                               | 102                | 73                  | 128  |
| EP080: Naphthalene                                                                                   | 91-20-3    | 1   | mg/kg | <1                          | 0.5 mg/kg                             | 94.6               | 61                  | 123  |

## 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**

| Sub-Matrix: SOIL                                                                 |                  |                            |            | Matrix Spike (MS) Report |                  |                     |      |
|----------------------------------------------------------------------------------|------------------|----------------------------|------------|--------------------------|------------------|---------------------|------|
|                                                                                  |                  |                            |            | Spike                    | SpikeRecovery(%) | Recovery Limits (%) |      |
| Laboratory sample ID                                                             | Client sample ID | Method: Compound           | CAS Number | Concentration            | MS               | Low                 | High |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2167449)                         |                  |                            |            |                          |                  |                     |      |
| EM1901317-004                                                                    | Anonymous        | EP080: C6 - C9 Fraction    | ----       | 28 mg/kg                 | 72.3             | 42                  | 131  |
| EP080/071: Total Petroleum Hydrocarbons (QCLot: 2169852)                         |                  |                            |            |                          |                  |                     |      |
| EM1901371-009                                                                    | Anonymous        | EP071: C10 - C14 Fraction  | ----       | 806 mg/kg                | 98.1             | 53                  | 123  |
|                                                                                  |                  | EP071: C15 - C28 Fraction  | ----       | 3006 mg/kg               | 106              | 70                  | 124  |
|                                                                                  |                  | EP071: C29 - C36 Fraction  | ----       | 1584 mg/kg               | 102              | 64                  | 118  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2167449) |                  |                            |            |                          |                  |                     |      |
| EM1901317-004                                                                    | Anonymous        | EP080: C6 - C10 Fraction   | C6_C10     | 33 mg/kg                 | 72.1             | 39                  | 129  |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2169852) |                  |                            |            |                          |                  |                     |      |
| EM1901371-009                                                                    | Anonymous        | EP071: >C10 - C16 Fraction | ----       | 1160 mg/kg               | 103              | 65                  | 123  |
|                                                                                  |                  | EP071: >C16 - C34 Fraction | ----       | 3978 mg/kg               | 104              | 67                  | 121  |
|                                                                                  |                  | EP071: >C34 - C40 Fraction | ----       | 313 mg/kg                | 90.4             | 44                  | 126  |
| EP080: BTEXN (QCLot: 2167449)                                                    |                  |                            |            |                          |                  |                     |      |
| EM1901317-004                                                                    | Anonymous        | EP080: Benzene             | 71-43-2    | 2 mg/kg                  | 73.9             | 50                  | 136  |
|                                                                                  |                  | EP080: Toluene             | 108-88-3   | 2 mg/kg                  | 74.4             | 56                  | 139  |

## QA/QC Compliance Assessment to assist with Quality Review

|              |                                                    |                         |                                    |
|--------------|----------------------------------------------------|-------------------------|------------------------------------|
| Work Order   | : EM1901343                                        | Page                    | : 1 of 5                           |
| Client       | : GHD PTY LTD                                      | Laboratory              | : Environmental Division Melbourne |
| Contact      | : KORY AUCH                                        | Telephone               | : +6138549 9630                    |
| Project      | : 3136558                                          | Date Samples Received   | : 23-Jan-2019                      |
| Site         | : Wonthaggi PSP - Targeted Intrusive Investigation | Issue Date              | : 06-Feb-2019                      |
| Sampler      | : ----                                             | No. of samples received | : 5                                |
| 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

- 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<br>Method                        | Count |         | Rate (%) |          | Quality Control Specification  |
|--------------------------------------------------------------|-------|---------|----------|----------|--------------------------------|
|                                                              | QC    | Regular | Actual   | Expected |                                |
| Laboratory Duplicates (DUP)                                  |       |         |          |          |                                |
| TRH - Semivolatile Fractions Only (after Silica Gel Cleanup) | 0     | 4       | 0.00     | 10.00    | NEPM 2013 B3 & ALS QC Standard |
| Matrix Spikes (MS)                                           |       |         |          |          |                                |
| TRH - Semivolatile Fractions Only (after Silica Gel Cleanup) | 0     | 4       | 0.00     | 5.00     | 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                                                                              | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-------------------------------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                                     |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EA055: Moisture Content (Dried @ 105-110°C)                                         |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EA055)<br>TP01_1.0                                    | 22-Jan-2019 | ----                     | ----               | ----       | 04-Feb-2019   | 05-Feb-2019      | ✓          |
| EP071 SG: Total Petroleum Hydrocarbons - Silica gel cleanup                         |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP071-SVSG)<br>TP08_0.1, TP09_0.1, CS04               | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 05-Feb-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071-SVSG)<br>TP07_0.1                               | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          | 05-Feb-2019   | 11-Mar-2019      | ✓          |
| EP071 SG: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Silica gel cleanup |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP071-SVSG)<br>TP08_0.1, TP09_0.1, CS04               | 22-Jan-2019 | 25-Jan-2019              | 05-Feb-2019        | ✓          | 05-Feb-2019   | 06-Mar-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071-SVSG)<br>TP07_0.1                               | 22-Jan-2019 | 30-Jan-2019              | 05-Feb-2019        | ✓          | 05-Feb-2019   | 11-Mar-2019      | ✓          |
| EP080/071: Total Petroleum Hydrocarbons                                             |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)<br>TP01_1.0                                    | 22-Jan-2019 | 04-Feb-2019              | 05-Feb-2019        | ✓          | 04-Feb-2019   | 05-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071)<br>TP01_1.0                                    | 22-Jan-2019 | 05-Feb-2019              | 05-Feb-2019        | ✓          | 05-Feb-2019   | 17-Mar-2019      | ✓          |

Page : 3 of 5  
 Work Order : EM1901343  
 Client : GHD PTY LTD  
 Project : 3136558



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

| Method                                                          | Sample Date | Extraction / Preparation |                    |            | Analysis      |                  |            |
|-----------------------------------------------------------------|-------------|--------------------------|--------------------|------------|---------------|------------------|------------|
| Container / Client Sample ID(s)                                 |             | Date extracted           | Due for extraction | Evaluation | Date analysed | Due for analysis | Evaluation |
| EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)<br>TP01_1.0                | 22-Jan-2019 | 04-Feb-2019              | 05-Feb-2019        | ✓          | 04-Feb-2019   | 05-Feb-2019      | ✓          |
| Soil Glass Jar - Unpreserved (EP071)<br>TP01_1.0                | 22-Jan-2019 | 05-Feb-2019              | 05-Feb-2019        | ✓          | 05-Feb-2019   | 17-Mar-2019      | ✓          |
| EP080: BTEXN                                                    |             |                          |                    |            |               |                  |            |
| Soil Glass Jar - Unpreserved (EP080)<br>TP01_1.0                | 22-Jan-2019 | 04-Feb-2019              | 05-Feb-2019        | ✓          | 04-Feb-2019   | 05-Feb-2019      | ✓          |



## 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     | 13      | 15.38    | 10.00    | ✓          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction                                  | EP071      | 1     | 7       | 14.29    | 10.00    | ✓          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fractions Only (after Silica Gel Cleanup) | EP071-SVSG | 0     | 4       | 0.00     | 10.00    | ✗          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                           | EP080      | 2     | 13      | 15.38    | 10.00    | ✓          | NEPM 2013 B3 & ALS QC Standard |
| Laboratory Control Samples (LCS)                             |            |       |         |          |          |            |                                |
| TRH - Semivolatile Fraction                                  | EP071      | 1     | 7       | 14.29    | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fractions Only (after Silica Gel Cleanup) | EP071-SVSG | 1     | 4       | 25.00    | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                           | EP080      | 1     | 13      | 7.69     | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| Method Blanks (MB)                                           |            |       |         |          |          |            |                                |
| TRH - Semivolatile Fraction                                  | EP071      | 1     | 7       | 14.29    | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fractions Only (after Silica Gel Cleanup) | EP071-SVSG | 1     | 4       | 25.00    | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                           | EP080      | 1     | 13      | 7.69     | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| Matrix Spikes (MS)                                           |            |       |         |          |          |            |                                |
| TRH - Semivolatile Fraction                                  | EP071      | 1     | 7       | 14.29    | 5.00     | ✓          | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fractions Only (after Silica Gel Cleanup) | EP071-SVSG | 0     | 4       | 0.00     | 5.00     | ✗          | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX                                           | EP080      | 1     | 13      | 7.69     | 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 7.1 and Table 1 (14 day holding time).                               |
| TRH - Semivolatile Fraction                                  | EP071      | SOIL   | In house: Referenced to USEPA SW 846 - 8015A. Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.                                             |
| TRH - Semivolatile Fractions Only (after Silica Gel Cleanup) | EP071-SVSG | SOIL   | In house: Referenced to USEPA SW 846 - 8015A. Sample extracts are cleaned up using silica gel and are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.         |
| TRH Volatiles/BTEX                                           | EP080      | SOIL   | In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.                    |
| Preparation Methods                                          | Method     | Matrix | Method Descriptions                                                                                                                                                                                                                            |
| Methanolic Extraction of Soils for Purge and Trap            | ORG16      | SOIL   | In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.                                                                                              |
| Tumbler Extraction of Solids                                 | ORG17      | SOIL   | In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis. |

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

Attention: Kory Auch

Report **637673-S**  
Project name WONTHAGGI PSP - TARGETED INTUSIVE INVESTIGATION  
Project ID 3136558  
Received Date Jan 24, 2019

| Client Sample ID                                            |     |       | FS01<br>Soil<br>M19-Ja22984<br>Jan 22, 2019 | FS02<br>Soil<br>M19-Ja22985<br>Jan 22, 2019 | FS03<br>Soil<br>M19-Ja22986<br>Jan 23, 2019 |
|-------------------------------------------------------------|-----|-------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| Sample Matrix                                               |     |       |                                             |                                             |                                             |
| Eurofins   mgt Sample No.                                   |     |       |                                             |                                             |                                             |
| Date Sampled                                                |     |       |                                             |                                             |                                             |
| Test/Reference                                              | LOR | Unit  |                                             |                                             |                                             |
| <b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b> |     |       |                                             |                                             |                                             |
| 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                                        | 140                                         |
| TRH C10-36 (Total)                                          | 50  | mg/kg | < 50                                        | < 50                                        | 140                                         |
| <b>Volatile Organics</b>                                    |     |       |                                             |                                             |                                             |
| 1,2,4-Trichlorobenzene                                      | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Hexachlorobutadiene                                         | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| <b>BTEX</b>                                                 |     |       |                                             |                                             |                                             |
| 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   | %     | 60                                          | -                                           | -                                           |
| <b>Volatile Organics</b>                                    |     |       |                                             |                                             |                                             |
| 1.1-Dichloroethane                                          | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.1-Dichloroethene                                          | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.1.1-Trichloroethane                                       | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.1.1.2-Tetrachloroethane                                   | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.1.2-Trichloroethane                                       | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.1.2.2-Tetrachloroethane                                   | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.2-Dibromoethane                                           | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.2-Dichlorobenzene                                         | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.2-Dichloroethane                                          | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.2-Dichloropropane                                         | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.2.3-Trichloropropane                                      | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.2.4-Trimethylbenzene                                      | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.3-Dichlorobenzene                                         | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.3-Dichloropropane                                         | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.3.5-Trimethylbenzene                                      | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 1.4-Dichlorobenzene                                         | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 2-Butanone (MEK)                                            | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 2-Propanone (Acetone)                                       | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |



| Client Sample ID<br>Sample Matrix<br>Eurofins   mgt Sample No.<br>Date Sampled<br>Test/Reference | LOR | Unit  | FS01<br>Soil<br>M19-Ja22984<br>Jan 22, 2019 | FS02<br>Soil<br>M19-Ja22985<br>Jan 22, 2019 | FS03<br>Soil<br>M19-Ja22986<br>Jan 23, 2019 |
|--------------------------------------------------------------------------------------------------|-----|-------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| <b>Volatile Organics</b>                                                                         |     |       |                                             |                                             |                                             |
| 4-Chlorotoluene                                                                                  | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 4-Methyl-2-pentanone (MIBK)                                                                      | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Allyl chloride                                                                                   | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Benzene                                                                                          | 0.1 | mg/kg | -                                           | < 0.1                                       | < 0.1                                       |
| Bromobenzene                                                                                     | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Bromochloromethane                                                                               | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Bromodichloromethane                                                                             | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Bromoform                                                                                        | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Bromomethane                                                                                     | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Carbon disulfide                                                                                 | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Carbon Tetrachloride                                                                             | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Chlorobenzene                                                                                    | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Chloroethane                                                                                     | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Chloroform                                                                                       | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Chloromethane                                                                                    | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| cis-1.2-Dichloroethene                                                                           | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| cis-1.3-Dichloropropene                                                                          | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Dibromochloromethane                                                                             | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Dibromomethane                                                                                   | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Dichlorodifluoromethane                                                                          | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Ethylbenzene                                                                                     | 0.1 | mg/kg | -                                           | < 0.1                                       | < 0.1                                       |
| Iodomethane                                                                                      | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Isopropyl benzene (Cumene)                                                                       | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| m&p-Xylenes                                                                                      | 0.2 | mg/kg | -                                           | < 0.2                                       | < 0.2                                       |
| Methylene Chloride                                                                               | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| o-Xylene                                                                                         | 0.1 | mg/kg | -                                           | < 0.1                                       | < 0.1                                       |
| Styrene                                                                                          | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Tetrachloroethene                                                                                | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Toluene                                                                                          | 0.1 | mg/kg | -                                           | < 0.1                                       | < 0.1                                       |
| trans-1.2-Dichloroethene                                                                         | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| trans-1.3-Dichloropropene                                                                        | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Trichloroethene                                                                                  | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Trichlorofluoromethane                                                                           | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Vinyl chloride                                                                                   | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Xylenes - Total                                                                                  | 0.3 | mg/kg | -                                           | < 0.3                                       | < 0.3                                       |
| Total MAH*                                                                                       | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Vic EPA IWRG 621 CHC (Total)*                                                                    | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| Vic EPA IWRG 621 Other CHC (Total)*                                                              | 0.5 | mg/kg | -                                           | < 0.5                                       | < 0.5                                       |
| 4-Bromofluorobenzene (surr.)                                                                     | 1   | %     | -                                           | 88                                          | 118                                         |
| Toluene-d8 (surr.)                                                                               | 1   | %     | -                                           | 72                                          | 98                                          |
| <b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b>                                      |     |       |                                             |                                             |                                             |
| Naphthalene <sup>N02</sup>                                                                       | 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) <sup>N04</sup>                                                         | 20  | mg/kg | < 20                                        | < 20                                        | < 20                                        |
| TRH >C10-C16                                                                                     | 50  | mg/kg | < 50                                        | < 50                                        | < 50                                        |
| TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>                                                | 50  | mg/kg | < 50                                        | < 50                                        | < 50                                        |
| TRH >C16-C34                                                                                     | 100 | mg/kg | < 100                                       | < 100                                       | 150                                         |
| TRH >C34-C40                                                                                     | 100 | mg/kg | < 100                                       | < 100                                       | < 100                                       |
| TRH >C10-C40 (total)*                                                                            | 100 | mg/kg | < 100                                       | < 100                                       | 150                                         |

| Client Sample ID<br>Sample Matrix<br>Eurofins   mgt Sample No.<br>Date Sampled<br>Test/Reference | LOR  | Unit  | FS01<br>Soil<br>M19-Ja22984<br>Jan 22, 2019 | FS02<br>Soil<br>M19-Ja22985<br>Jan 22, 2019 | FS03<br>Soil<br>M19-Ja22986<br>Jan 23, 2019 |
|--------------------------------------------------------------------------------------------------|------|-------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| <b>Polycyclic Aromatic Hydrocarbons</b>                                                          |      |       |                                             |                                             |                                             |
| 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                                       |
| Benzo(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 <sup>N07</sup>                                                            | 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    | %     | 83                                          | 52                                          | 88                                          |
| p-Terphenyl-d14 (surr.)                                                                          | 1    | %     | 130                                         | 147                                         | 131                                         |
| <b>Organochlorine Pesticides</b>                                                                 |      |       |                                             |                                             |                                             |
| 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                                      |
| α-BHC                                                                                            | 0.05 | mg/kg | < 0.05                                      | < 0.05                                      | < 0.05                                      |
| Aldrin                                                                                           | 0.05 | mg/kg | < 0.05                                      | < 0.05                                      | < 0.05                                      |
| β-BHC                                                                                            | 0.05 | mg/kg | < 0.05                                      | < 0.05                                      | < 0.05                                      |
| δ-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                                      |
| γ-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                                                                                     | 0.05 | mg/kg | < 0.05                                      | < 0.05                                      | < 0.05                                      |
| 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 | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Vic EPA IWRG 621 Other OCP (Total)*                                                              | 0.1  | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Dibutylchloroendate (surr.)                                                                      | 1    | %     | 122                                         | 98                                          | 78                                          |
| Tetrachloro-m-xylene (surr.)                                                                     | 1    | %     | 97                                          | 91                                          | 93                                          |

| Client Sample ID<br>Sample Matrix<br>Eurofins   mgt Sample No.<br>Date Sampled<br>Test/Reference | LOR | Unit  | FS01<br>Soil<br>M19-Ja22984<br>Jan 22, 2019 | FS02<br>Soil<br>M19-Ja22985<br>Jan 22, 2019 | FS03<br>Soil<br>M19-Ja22986<br>Jan 23, 2019 |
|--------------------------------------------------------------------------------------------------|-----|-------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| <b>Organophosphorus Pesticides</b>                                                               |     |       |                                             |                                             |                                             |
| 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   | %     | 79                                          | -                                           | -                                           |
| <b>Polychlorinated Biphenyls</b>                                                                 |     |       |                                             |                                             |                                             |
| Aroclor-1016                                                                                     | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Aroclor-1221                                                                                     | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Aroclor-1232                                                                                     | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Aroclor-1242                                                                                     | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Aroclor-1248                                                                                     | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Aroclor-1254                                                                                     | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Aroclor-1260                                                                                     | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Total PCB*                                                                                       | 0.1 | mg/kg | < 0.1                                       | < 0.1                                       | < 0.1                                       |
| Dibutylchlorendate (surr.)                                                                       | 1   | %     | 122                                         | 98                                          | 78                                          |
| Tetrachloro-m-xylene (surr.)                                                                     | 1   | %     | 97                                          | 91                                          | 93                                          |

| Client Sample ID                         |     |          | FS01         | FS02         | FS03         |
|------------------------------------------|-----|----------|--------------|--------------|--------------|
| Sample Matrix                            |     |          | Soil         | Soil         | Soil         |
| Eurofins   mgt Sample No.                |     |          | M19-Ja22984  | M19-Ja22985  | M19-Ja22986  |
| Date Sampled                             |     |          | Jan 22, 2019 | Jan 22, 2019 | Jan 23, 2019 |
| Test/Reference                           | LOR | Unit     |              |              |              |
| <b>Phenols (Halogenated)</b>             |     |          |              |              |              |
| 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               | 1   | mg/kg    | < 1          | < 1          | < 1          |
| Total Halogenated Phenol*                | 1   | mg/kg    | < 1          | < 1          | < 1          |
| <b>Phenols (non-Halogenated)</b>         |     |          |              |              |              |
| 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                            | 1.0 | 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   | %        | 103          | 77           | 102          |
|                                          |     |          |              |              |              |
| Chromium (hexavalent)                    | 1   | mg/kg    | -            | < 1          | < 1          |
| Cyanide (total)                          | 5   | mg/kg    | -            | < 5          | < 5          |
| Fluoride                                 | 100 | mg/kg    | -            | 300          | 240          |
| pH (1:5 Aqueous extract at 25°C as rec.) | 0.1 | pH Units | -            | 5.9          | 5.7          |
| % Moisture                               | 1   | %        | 16           | 38           | 16           |
| <b>Heavy Metals</b>                      |     |          |              |              |              |
| Arsenic                                  | 2   | mg/kg    | -            | 5.4          | 2.9          |
| Cadmium                                  | 0.4 | mg/kg    | -            | < 0.4        | < 0.4        |
| Chromium                                 | 5   | mg/kg    | -            | 22           | 16           |
| Copper                                   | 5   | mg/kg    | -            | 8.2          | 13           |
| Lead                                     | 5   | mg/kg    | -            | 14           | 16           |
| Mercury                                  | 0.1 | mg/kg    | -            | < 0.1        | < 0.1        |
| Molybdenum                               | 5   | mg/kg    | -            | < 5          | < 5          |
| Nickel                                   | 5   | mg/kg    | -            | < 5          | 10           |
| Selenium                                 | 2   | mg/kg    | -            | < 2          | < 2          |
| Silver                                   | 0.2 | mg/kg    | -            | < 0.2        | < 0.2        |
| Tin                                      | 10  | mg/kg    | -            | < 10         | < 10         |
| Zinc                                     | 5   | mg/kg    | -            | 31           | 30           |

## 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 (regarding both quality and NATA accreditation).

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 |
|------------------------------------------------------------------------|--------------|--------------|--------------|
| <b>Vic EPA IWRG 621 (Solids)</b>                                       |              |              |              |
| Total Recoverable Hydrocarbons - 1999 NEPM Fractions                   | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2010 TRH C6-C40                                      |              |              |              |
| Volatile Organics                                                      | Melbourne    | Jan 26, 2019 | 7 Day        |
| - Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS              |              |              |              |
| Volatile Organics                                                      | Melbourne    | Jan 26, 2019 | 7 Days       |
| - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices |              |              |              |
| Total Recoverable Hydrocarbons - 2013 NEPM Fractions                   | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2010 TRH C6-C40                                      |              |              |              |
| Total Recoverable Hydrocarbons - 2013 NEPM Fractions                   | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2010 TRH C6-C40                                      |              |              |              |
| Polycyclic Aromatic Hydrocarbons                                       | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water               |              |              |              |
| Organochlorine Pesticides                                              | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2220 OCP & PCB in Soil and Water                     |              |              |              |
| Polychlorinated Biphenyls                                              | Melbourne    | Jan 26, 2019 | 28 Days      |
| - Method: LTM-ORG-2220 OCP & PCB in Soil and Water                     |              |              |              |
| Phenols (Halogenated)                                                  | Melbourne    | Jan 26, 2019 | 14 Days      |
| - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water               |              |              |              |
| Phenols (non-Halogenated)                                              | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water               |              |              |              |
| Chromium (hexavalent)                                                  | Melbourne    | Jan 26, 2019 | 28 Day       |
| - Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)   |              |              |              |
| Cyanide (total)                                                        | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA                   |              |              |              |
| Fluoride                                                               | Melbourne    | Jan 29, 2019 | 28 Day       |
| - Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE    |              |              |              |
| pH (1:5 Aqueous extract at 25°C as rec.)                               | Melbourne    | Jan 26, 2019 | 7 Day        |
| - Method: LTM-GEN-7090 pH in soil by ISE                               |              |              |              |
| Metals IWRG 621 : Metals M12                                           | Melbourne    | Jan 26, 2019 | 28 Day       |
| - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS   |              |              |              |
| <b>BTEX and Naphthalene</b>                                            |              |              |              |
| BTEX                                                                   | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices |              |              |              |
| Organophosphorus Pesticides                                            | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS            |              |              |              |
| % Moisture                                                             | Melbourne    | Jan 26, 2019 | 14 Day       |
| - Method: LTM-GEN-7080 Moisture                                        |              |              |              |



**Company Name:** GHD Pty Ltd VIC  
**Address:** Level 8, 180 Lonsdale St  
Melbourne  
VIC 3000

**Project Name:** WONTHAGGI PSP - TARGETED INTUSIVE INVESTIGATION  
**Project ID:** 3136558

**Order No.:**  
**Report #:** 637673  
**Phone:** 8687 8000  
**Fax:** 8687 8111

**Received:** Jan 24, 2019 3:30 PM  
**Due:** Feb 1, 2019  
**Priority:** 5 Day  
**Contact Name:** Kory Auch

**Eurofins | mgt Analytical Services Manager : Mary Makarios**

| Sample Detail                                   |           |              |               |        |             | Polycyclic Aromatic Hydrocarbons | Organochlorine Pesticides | Organophosphorus Pesticides | Polychlorinated Biphenyls | Phenols (IWRG 621) | BTEX and Naphthalene | Moisture Set | Total Recoverable Hydrocarbons | Vic EPA IWRG 621 (Solids) |
|-------------------------------------------------|-----------|--------------|---------------|--------|-------------|----------------------------------|---------------------------|-----------------------------|---------------------------|--------------------|----------------------|--------------|--------------------------------|---------------------------|
| Melbourne Laboratory - NATA Site # 1254 & 14271 |           |              |               |        |             | X                                | X                         | X                           | X                         | X                  | X                    | X            | X                              | X                         |
| Sydney Laboratory - NATA Site # 18217           |           |              |               |        |             |                                  |                           |                             |                           |                    |                      |              |                                |                           |
| Brisbane Laboratory - NATA Site # 20794         |           |              |               |        |             |                                  |                           |                             |                           |                    |                      |              |                                |                           |
| Perth Laboratory - NATA Site # 23736            |           |              |               |        |             |                                  |                           |                             |                           |                    |                      |              |                                |                           |
| External Laboratory                             |           |              |               |        |             |                                  |                           |                             |                           |                    |                      |              |                                |                           |
| No                                              | Sample ID | Sample Date  | Sampling Time | Matrix | LAB ID      |                                  |                           |                             |                           |                    |                      |              |                                |                           |
| 1                                               | FS01      | Jan 22, 2019 | 9:00AM        | Soil   | M19-Ja22984 | X                                | X                         | X                           | X                         | X                  | X                    | X            | X                              |                           |
| 2                                               | FS02      | Jan 22, 2019 | 10:30AM       | Soil   | M19-Ja22985 |                                  |                           |                             |                           |                    |                      | X            |                                | X                         |
| 3                                               | FS03      | Jan 23, 2019 | 10:30AM       | Soil   | M19-Ja22986 |                                  |                           |                             |                           |                    |                      | X            |                                | X                         |
| Test Counts                                     |           |              |               |        |             | 1                                | 1                         | 1                           | 1                         | 1                  | 1                    | 3            | 1                              | 2                         |

## CHAIN OF CUSTODY RECORD

GHD



GHD Melbourne  
180 Lonsdale Street, Melbourne 3000  
Telephone: 613 8687 6000 Facsimile: 613 8687 8111

44  
Page 1 of 4

|                                                             |                 |                                               |   |                                                                        |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
|-------------------------------------------------------------|-----------------|-----------------------------------------------|---|------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------|--|--------------------------------------------------------|--|-------------------------------------|--|----------------------------|--|--------------------------------|--|------------------------------------------|--|------|--|---------|--|--|--|--|--|
| Job Number<br>3136558                                       |                 | GHD Office<br>Melbourne                       |   | Laboratory:<br>ALS Springvale                                          |  | PLEASE NOTE:<br><br>EM-929<br>#14<br><br>- E-mail results to the GHD Contact with the GHD Job Number in the e-mail subject line.<br><br>Results to be provided in ESDAT compatible format |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| Project<br>Wonthaggi PSP - Targeted Intrusive Investigation |                 |                                               |   | Address:<br>2 - 4 Westall Rd, Springvale                               |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  | Lab Contact:<br>Shirley LeComu |  |                                          |  |      |  |         |  |  |  |  |  |
| GHD Contact<br>Kory Auch                                    |                 | Contact Email<br>kory.auch@ghd.com            |   | Container<br>Type                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  | Analyses Required              |  |                                          |  |      |  |         |  |  |  |  |  |
| Standard TAT                                                |                 | Quote No./GHD Reference<br>EN/005/18 (Vic BQ) |   | Sample Matrix:<br>S: Soil<br>SL: Sludge<br>W: Water<br>GW: Groundwater |  | J: soil jar<br>V: vial<br>G: glass bottle<br>P: plastic bottle                                                                                                                            |   | IWRG621 suite (P-16) |  | TRH (C6-C40) / BTEXN / PAH / Phenols / OC / OP / PCB / |  | Asbestos (presense/absense) (EA200) |  | TRH (C10-C40) (Silica Gel) |  | TRH(C6-C10)/BTEXN (W-18)       |  | Send to Eurofins for equivalent analysis |  | HOLD |  | Remarks |  |  |  |  |  |
| Sample I.D.                                                 | Date            | Time                                          |   |                                                                        |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FD01 36                                                     | 22 / Jan / 2019 | 09:00                                         | S | J                                                                      |  |                                                                                                                                                                                           |   | X                    |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FD02 37                                                     | 22 / Jan / 2019 | 10:30                                         | S | J                                                                      |  |                                                                                                                                                                                           | X |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FD03 38                                                     | 23 / Jan / 2019 | 10:30                                         | S | J                                                                      |  |                                                                                                                                                                                           | X |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FD04                                                        | 23 / Jan / 2019 |                                               | S | J                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FS01                                                        | 22 / Jan / 2019 | 09:00                                         | S | J                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FS02                                                        | 22 / Jan / 2019 | 10:30                                         | S | J                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FS03                                                        | 23 / Jan / 2019 | 10:30                                         | S | J                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| FS04                                                        | 23 / Jan / 2019 |                                               | S | J                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| TB01 39                                                     | 22 / Jan / 2019 | 12:00                                         | W | V                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| TB02 40                                                     | 23 / Jan / 2019 | 12:00                                         | W | V                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| TB03                                                        | 23 / Jan / 2019 |                                               | W | V                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |
| TB04                                                        | 23 / Jan / 2019 |                                               | W | V                                                                      |  |                                                                                                                                                                                           |   |                      |  |                                                        |  |                                     |  |                            |  |                                |  |                                          |  |      |  |         |  |  |  |  |  |

|                      |                                            |            |               |              |                 |            |                    |
|----------------------|--------------------------------------------|------------|---------------|--------------|-----------------|------------|--------------------|
| Sampled by:          | Kory Auch / T/A                            | Date/Time: | 23/01/2019    | Relinquished | Kory Auch / T/A | Date/Time: | 23/01/2019 @ 12:45 |
| Received by:         |                                            | Date/Time: |               | Relinquished |                 | Date/Time: |                    |
| Received by Courier: |                                            | Date/Time: |               | Relinquished |                 | Date/Time: |                    |
| Received by Lab:     | Alice (ALS)                                | Date/Time: | 23/1/19 12:50 | Relinquished | Ru (ALS)        | Date/Time: | 24/1/19 @ 12:40 pm |
| Remarks:             | Please CC reports to GHD Lab Reports email |            |               |              |                 |            |                    |

24/1 3.30p 637673

## 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, April 2011 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. 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

|                         |                                                                                                                                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dry</b>              | Where a moisture has been determined on a solid sample the result is expressed on a dry basis.                                                                     |
| <b>LOR</b>              | Limit of Reporting.                                                                                                                                                |
| <b>SPIKE</b>            | Addition of the analyte to the sample and reported as percentage recovery.                                                                                         |
| <b>RPD</b>              | Relative Percent Difference between two Duplicate pieces of analysis.                                                                                              |
| <b>LCS</b>              | Laboratory Control Sample - reported as percent recovery.                                                                                                          |
| <b>CRM</b>              | Certified Reference Material - reported as percent recovery.                                                                                                       |
| <b>Method Blank</b>     | 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.     |
| <b>Surr - Surrogate</b> | The addition of a like compound to the analyte target and reported as percentage recovery.                                                                         |
| <b>Duplicate</b>        | A second piece of analysis from the same sample and reported in the same units as the result to show comparison.                                                   |
| <b>USEPA</b>            | United States Environmental Protection Agency                                                                                                                      |
| <b>APHA</b>             | American Public Health Association                                                                                                                                 |
| <b>TCLP</b>             | Toxicity Characteristic Leaching Procedure                                                                                                                         |
| <b>COC</b>              | Chain of Custody                                                                                                                                                   |
| <b>SRA</b>              | Sample Receipt Advice                                                                                                                                              |
| <b>QSM</b>              | US Department of Defense Quality Systems Manual Version 5.2 2018                                                                                                   |
| <b>CP</b>               | Client Parent - QC was performed on samples pertaining to this report                                                                                              |
| <b>NCP</b>              | 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. |
| <b>TEQ</b>              | 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 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 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.

## Sample Receipt Advice

Company name: **GHD Pty Ltd VIC**  
Contact name: **Kory Auch**  
Project name: **WONTHAGGI PSP - TARGETED INTUSIVE INVESTIGATION**  
Project ID: **3136558**  
COC number: **Not provided**  
Turn around time: **5 Day**  
Date/Time received: **Jan 24, 2019 3:30 PM**  
Eurofins | mgt reference: **637673**

### Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Appropriate sample containers have been used.
- ☐ Split sample sent to requested external lab.
- ☐ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

### Contact notes

If you have any questions with respect to these samples please contact:

Mary Makarios on Phone : +61 3 8564 5000 or by e.mail: MaryMakarios@eurofins.com

Results will be delivered electronically via e.mail to Kory Auch - kory.auch@ghd.com.

## Quality Control Results

| Test                                                        | Units | Result 1 |  |  | Acceptance Limits | Pass Limits | Qualifying Code |
|-------------------------------------------------------------|-------|----------|--|--|-------------------|-------------|-----------------|
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b> |       |          |  |  |                   |             |                 |
| 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        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Volatile Organics</b>                                    |       |          |  |  |                   |             |                 |
| 1,2,4-Trichlorobenzene                                      | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Hexachlorobutadiene                                         | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>BTEX</b>                                                 |       |          |  |  |                   |             |                 |
| 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        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Volatile Organics</b>                                    |       |          |  |  |                   |             |                 |
| 1,1-Dichloroethane                                          | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,1-Dichloroethene                                          | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,1,1-Trichloroethane                                       | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,1,1,2-Tetrachloroethane                                   | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,1,2-Trichloroethane                                       | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,1,2,2-Tetrachloroethane                                   | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,2-Dibromoethane                                           | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,2-Dichlorobenzene                                         | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,2-Dichloroethane                                          | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,2-Dichloropropane                                         | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,2,3-Trichloropropane                                      | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,2,4-Trimethylbenzene                                      | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,3-Dichlorobenzene                                         | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,3-Dichloropropane                                         | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,3,5-Trimethylbenzene                                      | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 1,4-Dichlorobenzene                                         | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 2-Butanone (MEK)                                            | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 2-Propanone (Acetone)                                       | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 4-Chlorotoluene                                             | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| 4-Methyl-2-pentanone (MIBK)                                 | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Allyl chloride                                              | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Bromobenzene                                                | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Bromochloromethane                                          | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Bromodichloromethane                                        | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Bromoform                                                   | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Bromomethane                                                | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Carbon disulfide                                            | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Carbon Tetrachloride                                        | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Chlorobenzene                                               | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Chloroethane                                                | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Chloroform                                                  | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Chloromethane                                               | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |



| Test                                                        | Units | Result 1 |  |  | Acceptance Limits | Pass Limits | Qualifying Code |
|-------------------------------------------------------------|-------|----------|--|--|-------------------|-------------|-----------------|
| cis-1.2-Dichloroethene                                      | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| cis-1.3-Dichloropropene                                     | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Dibromochloromethane                                        | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Dibromomethane                                              | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Dichlorodifluoromethane                                     | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Iodomethane                                                 | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Isopropyl benzene (Cumene)                                  | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Methylene Chloride                                          | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Styrene                                                     | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Tetrachloroethene                                           | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| trans-1.2-Dichloroethene                                    | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| trans-1.3-Dichloropropene                                   | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Trichloroethene                                             | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Trichlorofluoromethane                                      | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| Vinyl chloride                                              | mg/kg | < 0.5    |  |  | 0.5               | Pass        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b> |       |          |  |  |                   |             |                 |
| 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        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Polycyclic Aromatic Hydrocarbons</b>                     |       |          |  |  |                   |             |                 |
| 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        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Organochlorine Pesticides</b>                            |       |          |  |  |                   |             |                 |
| Chlordanes - Total                                          | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| 4.4'-DDD                                                    | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| 4.4'-DDE                                                    | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| 4.4'-DDT                                                    | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| a-BHC                                                       | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Aldrin                                                      | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| b-BHC                                                       | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| d-BHC                                                       | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Dieldrin                                                    | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Endosulfan I                                                | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Endosulfan II                                               | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Endosulfan sulphate                                         | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |

| Test                               | Units | Result 1 |  |  | Acceptance Limits | Pass Limits | Qualifying Code |
|------------------------------------|-------|----------|--|--|-------------------|-------------|-----------------|
| Endrin                             | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Endrin aldehyde                    | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Endrin ketone                      | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| g-BHC (Lindane)                    | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Heptachlor                         | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Heptachlor epoxide                 | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Hexachlorobenzene                  | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Methoxychlor                       | mg/kg | < 0.05   |  |  | 0.05              | Pass        |                 |
| Toxaphene                          | mg/kg | < 1      |  |  | 1                 | Pass        |                 |
| <b>Method Blank</b>                |       |          |  |  |                   |             |                 |
| <b>Organophosphorus Pesticides</b> |       |          |  |  |                   |             |                 |
| 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        |                 |
| <b>Method Blank</b>                |       |          |  |  |                   |             |                 |
| <b>Polychlorinated Biphenyls</b>   |       |          |  |  |                   |             |                 |
| Aroclor-1016                       | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| Aroclor-1221                       | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| Aroclor-1232                       | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| Aroclor-1242                       | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| Aroclor-1248                       | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| Aroclor-1254                       | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| Aroclor-1260                       | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |

| Test                                                        | Units | Result 1 |  |  | Acceptance Limits | Pass Limits | Qualifying Code |
|-------------------------------------------------------------|-------|----------|--|--|-------------------|-------------|-----------------|
| Total PCB*                                                  | mg/kg | < 0.1    |  |  | 0.1               | Pass        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Phenols (Halogenated)</b>                                |       |          |  |  |                   |             |                 |
| 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 | < 1      |  |  | 1                 | Pass        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Phenols (non-Halogenated)</b>                            |       |          |  |  |                   |             |                 |
| 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      |  |  | 1.0               | 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        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| Chromium (hexavalent)                                       | mg/kg | < 1      |  |  | 1                 | Pass        |                 |
| Cyanide (total)                                             | mg/kg | < 5      |  |  | 5                 | Pass        |                 |
| Fluoride                                                    | mg/kg | < 100    |  |  | 100               | Pass        |                 |
| <b>Method Blank</b>                                         |       |          |  |  |                   |             |                 |
| <b>Heavy Metals</b>                                         |       |          |  |  |                   |             |                 |
| 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        |                 |
| Molybdenum                                                  | mg/kg | < 5      |  |  | 5                 | Pass        |                 |
| Nickel                                                      | mg/kg | < 5      |  |  | 5                 | Pass        |                 |
| Selenium                                                    | mg/kg | < 2      |  |  | 2                 | Pass        |                 |
| Silver                                                      | mg/kg | < 0.2    |  |  | 0.2               | Pass        |                 |
| Tin                                                         | mg/kg | < 10     |  |  | 10                | Pass        |                 |
| Zinc                                                        | mg/kg | < 5      |  |  | 5                 | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |       |          |  |  |                   |             |                 |
| <b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b> |       |          |  |  |                   |             |                 |
| TRH C6-C9                                                   | %     | 113      |  |  | 70-130            | Pass        |                 |
| TRH C10-C14                                                 | %     | 129      |  |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |       |          |  |  |                   |             |                 |
| <b>BTEX</b>                                                 |       |          |  |  |                   |             |                 |
| Benzene                                                     | %     | 102      |  |  | 70-130            | Pass        |                 |
| Toluene                                                     | %     | 96       |  |  | 70-130            | Pass        |                 |
| Ethylbenzene                                                | %     | 97       |  |  | 70-130            | Pass        |                 |
| m&p-Xylenes                                                 | %     | 96       |  |  | 70-130            | Pass        |                 |
| Xylenes - Total                                             | %     | 96       |  |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |       |          |  |  |                   |             |                 |
| <b>Volatile Organics</b>                                    |       |          |  |  |                   |             |                 |

| Test                                                        | Units | Result 1 |  |  | Acceptance Limits | Pass Limits | Qualifying Code |
|-------------------------------------------------------------|-------|----------|--|--|-------------------|-------------|-----------------|
| 1.1-Dichloroethene                                          | %     | 78       |  |  | 70-130            | Pass        |                 |
| 1.1.1-Trichloroethane                                       | %     | 96       |  |  | 70-130            | Pass        |                 |
| 1.2-Dichlorobenzene                                         | %     | 112      |  |  | 70-130            | Pass        |                 |
| 1.2-Dichloroethane                                          | %     | 112      |  |  | 70-130            | Pass        |                 |
| Trichloroethene                                             | %     | 89       |  |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |       |          |  |  |                   |             |                 |
| <b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b> |       |          |  |  |                   |             |                 |
| Naphthalene                                                 | %     | 111      |  |  | 70-130            | Pass        |                 |
| TRH C6-C10                                                  | %     | 118      |  |  | 70-130            | Pass        |                 |
| TRH >C10-C16                                                | %     | 121      |  |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |       |          |  |  |                   |             |                 |
| <b>Polycyclic Aromatic Hydrocarbons</b>                     |       |          |  |  |                   |             |                 |
| Acenaphthene                                                | %     | 102      |  |  | 70-130            | Pass        |                 |
| Acenaphthylene                                              | %     | 101      |  |  | 70-130            | Pass        |                 |
| Anthracene                                                  | %     | 84       |  |  | 70-130            | Pass        |                 |
| Benz(a)anthracene                                           | %     | 86       |  |  | 70-130            | Pass        |                 |
| Benzo(a)pyrene                                              | %     | 116      |  |  | 70-130            | Pass        |                 |
| Benzo(b&j)fluoranthene                                      | %     | 108      |  |  | 70-130            | Pass        |                 |
| Benzo(g,h,i)perylene                                        | %     | 87       |  |  | 70-130            | Pass        |                 |
| Benzo(k)fluoranthene                                        | %     | 78       |  |  | 70-130            | Pass        |                 |
| Chrysene                                                    | %     | 108      |  |  | 70-130            | Pass        |                 |
| Dibenz(a,h)anthracene                                       | %     | 80       |  |  | 70-130            | Pass        |                 |
| Fluoranthene                                                | %     | 91       |  |  | 70-130            | Pass        |                 |
| Fluorene                                                    | %     | 101      |  |  | 70-130            | Pass        |                 |
| Indeno(1,2,3-cd)pyrene                                      | %     | 78       |  |  | 70-130            | Pass        |                 |
| Naphthalene                                                 | %     | 101      |  |  | 70-130            | Pass        |                 |
| Phenanthrene                                                | %     | 97       |  |  | 70-130            | Pass        |                 |
| Pyrene                                                      | %     | 94       |  |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |       |          |  |  |                   |             |                 |
| <b>Organochlorine Pesticides</b>                            |       |          |  |  |                   |             |                 |
| Chlordanes - Total                                          | %     | 90       |  |  | 70-130            | Pass        |                 |
| 4,4'-DDD                                                    | %     | 71       |  |  | 70-130            | Pass        |                 |
| 4,4'-DDE                                                    | %     | 88       |  |  | 70-130            | Pass        |                 |
| 4,4'-DDT                                                    | %     | 89       |  |  | 70-130            | Pass        |                 |
| α-BHC                                                       | %     | 104      |  |  | 70-130            | Pass        |                 |
| Aldrin                                                      | %     | 97       |  |  | 70-130            | Pass        |                 |
| β-BHC                                                       | %     | 98       |  |  | 70-130            | Pass        |                 |
| δ-BHC                                                       | %     | 107      |  |  | 70-130            | Pass        |                 |
| Dieldrin                                                    | %     | 113      |  |  | 70-130            | Pass        |                 |
| Endosulfan I                                                | %     | 111      |  |  | 70-130            | Pass        |                 |
| Endosulfan II                                               | %     | 102      |  |  | 70-130            | Pass        |                 |
| Endosulfan sulphate                                         | %     | 78       |  |  | 70-130            | Pass        |                 |
| Endrin                                                      | %     | 72       |  |  | 70-130            | Pass        |                 |
| Endrin aldehyde                                             | %     | 83       |  |  | 70-130            | Pass        |                 |
| Endrin ketone                                               | %     | 85       |  |  | 70-130            | Pass        |                 |
| γ-BHC (Lindane)                                             | %     | 115      |  |  | 70-130            | Pass        |                 |
| Heptachlor epoxide                                          | %     | 85       |  |  | 70-130            | Pass        |                 |
| Hexachlorobenzene                                           | %     | 115      |  |  | 70-130            | Pass        |                 |
| Methoxychlor                                                | %     | 78       |  |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |       |          |  |  |                   |             |                 |
| <b>Organophosphorus Pesticides</b>                          |       |          |  |  |                   |             |                 |
| Diazinon                                                    | %     | 103      |  |  | 70-130            | Pass        |                 |
| Dimethoate                                                  | %     | 81       |  |  | 70-130            | Pass        |                 |
| Ethion                                                      | %     | 92       |  |  | 70-130            | Pass        |                 |

| Test                                                        |               |           | Units | Result 1 |  | Acceptance Limits | Pass Limits | Qualifying Code |
|-------------------------------------------------------------|---------------|-----------|-------|----------|--|-------------------|-------------|-----------------|
| Fenitrothion                                                |               |           | %     | 105      |  | 70-130            | Pass        |                 |
| Methyl parathion                                            |               |           | %     | 101      |  | 70-130            | Pass        |                 |
| Mevinphos                                                   |               |           | %     | 104      |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |               |           |       |          |  |                   |             |                 |
| <b>Phenols (Halogenated)</b>                                |               |           |       |          |  |                   |             |                 |
| 2-Chlorophenol                                              |               |           | %     | 100      |  | 30-130            | Pass        |                 |
| 2.4-Dichlorophenol                                          |               |           | %     | 92       |  | 30-130            | Pass        |                 |
| 2.4.5-Trichlorophenol                                       |               |           | %     | 70       |  | 30-130            | Pass        |                 |
| 2.4.6-Trichlorophenol                                       |               |           | %     | 69       |  | 30-130            | Pass        |                 |
| 2.6-Dichlorophenol                                          |               |           | %     | 106      |  | 30-130            | Pass        |                 |
| 4-Chloro-3-methylphenol                                     |               |           | %     | 84       |  | 30-130            | Pass        |                 |
| Pentachlorophenol                                           |               |           | %     | 36       |  | 30-130            | Pass        |                 |
| Tetrachlorophenols - Total                                  |               |           | %     | 67       |  | 30-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |               |           |       |          |  |                   |             |                 |
| <b>Phenols (non-Halogenated)</b>                            |               |           |       |          |  |                   |             |                 |
| 2-Methyl-4.6-dinitrophenol                                  |               |           | %     | 82       |  | 30-130            | Pass        |                 |
| 2-Methylphenol (o-Cresol)                                   |               |           | %     | 93       |  | 30-130            | Pass        |                 |
| 2-Nitrophenol                                               |               |           | %     | 121      |  | 30-130            | Pass        |                 |
| 2.4-Dimethylphenol                                          |               |           | %     | 84       |  | 30-130            | Pass        |                 |
| 3&4-Methylphenol (m&p-Cresol)                               |               |           | %     | 93       |  | 30-130            | Pass        |                 |
| 4-Nitrophenol                                               |               |           | %     | 50       |  | 30-130            | Pass        |                 |
| Phenol                                                      |               |           | %     | 95       |  | 30-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |               |           |       |          |  |                   |             |                 |
| Chromium (hexavalent)                                       |               |           | %     | 103      |  | 70-130            | Pass        |                 |
| Cyanide (total)                                             |               |           | %     | 93       |  | 70-130            | Pass        |                 |
| Fluoride                                                    |               |           | %     | 97       |  | 70-130            | Pass        |                 |
| <b>LCS - % Recovery</b>                                     |               |           |       |          |  |                   |             |                 |
| <b>Heavy Metals</b>                                         |               |           |       |          |  |                   |             |                 |
| Arsenic                                                     |               |           | %     | 111      |  | 80-120            | Pass        |                 |
| Cadmium                                                     |               |           | %     | 108      |  | 80-120            | Pass        |                 |
| Chromium                                                    |               |           | %     | 118      |  | 80-120            | Pass        |                 |
| Copper                                                      |               |           | %     | 115      |  | 80-120            | Pass        |                 |
| Lead                                                        |               |           | %     | 113      |  | 80-120            | Pass        |                 |
| Mercury                                                     |               |           | %     | 111      |  | 75-125            | Pass        |                 |
| Molybdenum                                                  |               |           | %     | 113      |  | 80-120            | Pass        |                 |
| Nickel                                                      |               |           | %     | 113      |  | 80-120            | Pass        |                 |
| Selenium                                                    |               |           | %     | 110      |  | 80-120            | Pass        |                 |
| Silver                                                      |               |           | %     | 113      |  | 80-120            | Pass        |                 |
| Tin                                                         |               |           | %     | 120      |  | 80-120            | Pass        |                 |
| Zinc                                                        |               |           | %     | 113      |  | 80-120            | Pass        |                 |
| Test                                                        | Lab Sample ID | QA Source | Units | Result 1 |  | Acceptance Limits | Pass Limits | Qualifying Code |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |  |                   |             |                 |
| <b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b> |               |           |       | Result 1 |  |                   |             |                 |
| TRH C6-C9                                                   | M19-Ja21071   | NCP       | %     | 91       |  | 70-130            | Pass        |                 |
| TRH C10-C14                                                 | M19-Ja21647   | NCP       | %     | 95       |  | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |  |                   |             |                 |
| <b>BTEX</b>                                                 |               |           |       | Result 1 |  |                   |             |                 |
| Benzene                                                     | M19-Ja21071   | NCP       | %     | 95       |  | 70-130            | Pass        |                 |
| Toluene                                                     | M19-Ja21071   | NCP       | %     | 118      |  | 70-130            | Pass        |                 |
| Ethylbenzene                                                | M19-Ja21071   | NCP       | %     | 116      |  | 70-130            | Pass        |                 |
| m&p-Xylenes                                                 | M19-Ja21071   | NCP       | %     | 116      |  | 70-130            | Pass        |                 |
| o-Xylene                                                    | M19-Ja21071   | NCP       | %     | 118      |  | 70-130            | Pass        |                 |
| Xylenes - Total                                             | M19-Ja21071   | NCP       | %     | 117      |  | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |  |                   |             |                 |



| Test                                                        | Lab Sample ID | QA Source | Units | Result 1 |  |  | Acceptance Limits | Pass Limits | Qualifying Code |
|-------------------------------------------------------------|---------------|-----------|-------|----------|--|--|-------------------|-------------|-----------------|
| <b>Total Recoverable Hydrocarbons - 2013 NEPM Fractions</b> |               |           |       | Result 1 |  |  |                   |             |                 |
| Naphthalene                                                 | M19-Ja21071   | NCP       | %     | 125      |  |  | 70-130            | Pass        |                 |
| TRH C6-C10                                                  | M19-Ja21071   | NCP       | %     | 101      |  |  | 70-130            | Pass        |                 |
| TRH >C10-C16                                                | M19-Ja21647   | NCP       | %     | 90       |  |  | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |  |  |                   |             |                 |
| <b>Polycyclic Aromatic Hydrocarbons</b>                     |               |           |       | Result 1 |  |  |                   |             |                 |
| Acenaphthene                                                | M19-Ja23164   | NCP       | %     | 106      |  |  | 70-130            | Pass        |                 |
| Acenaphthylene                                              | M19-Ja23164   | NCP       | %     | 107      |  |  | 70-130            | Pass        |                 |
| Anthracene                                                  | M19-Ja23164   | NCP       | %     | 91       |  |  | 70-130            | Pass        |                 |
| Benz(a)anthracene                                           | M19-Ja23164   | NCP       | %     | 104      |  |  | 70-130            | Pass        |                 |
| Benzo(a)pyrene                                              | M19-Ja23164   | NCP       | %     | 98       |  |  | 70-130            | Pass        |                 |
| Benzo(b&j)fluoranthene                                      | M19-Ja23164   | NCP       | %     | 86       |  |  | 70-130            | Pass        |                 |
| Benzo(g,h,i)perylene                                        | M19-Ja23164   | NCP       | %     | 88       |  |  | 70-130            | Pass        |                 |
| Benzo(k)fluoranthene                                        | M19-Ja23164   | NCP       | %     | 116      |  |  | 70-130            | Pass        |                 |
| Chrysene                                                    | M19-Ja23164   | NCP       | %     | 122      |  |  | 70-130            | Pass        |                 |
| Dibenz(a,h)anthracene                                       | M19-Ja23164   | NCP       | %     | 85       |  |  | 70-130            | Pass        |                 |
| Fluoranthene                                                | M19-Ja23164   | NCP       | %     | 104      |  |  | 70-130            | Pass        |                 |
| Fluorene                                                    | M19-Ja23164   | NCP       | %     | 108      |  |  | 70-130            | Pass        |                 |
| Indeno(1,2,3-cd)pyrene                                      | M19-Ja23164   | NCP       | %     | 103      |  |  | 70-130            | Pass        |                 |
| Naphthalene                                                 | M19-Ja23164   | NCP       | %     | 106      |  |  | 70-130            | Pass        |                 |
| Phenanthrene                                                | M19-Ja23164   | NCP       | %     | 103      |  |  | 70-130            | Pass        |                 |
| Pyrene                                                      | M19-Ja23164   | NCP       | %     | 108      |  |  | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |  |  |                   |             |                 |
| <b>Organochlorine Pesticides</b>                            |               |           |       | Result 1 |  |  |                   |             |                 |
| Chlordanes - Total                                          | S19-Ja15481   | NCP       | %     | 97       |  |  | 70-130            | Pass        |                 |
| 4,4'-DDE                                                    | S19-Ja15481   | NCP       | %     | 104      |  |  | 70-130            | Pass        |                 |
| a-BHC                                                       | S19-Ja15481   | NCP       | %     | 102      |  |  | 70-130            | Pass        |                 |
| Aldrin                                                      | S19-Ja15481   | NCP       | %     | 105      |  |  | 70-130            | Pass        |                 |
| b-BHC                                                       | S19-Ja15481   | NCP       | %     | 97       |  |  | 70-130            | Pass        |                 |
| d-BHC                                                       | S19-Ja15481   | NCP       | %     | 102      |  |  | 70-130            | Pass        |                 |
| Dieldrin                                                    | S19-Ja15481   | NCP       | %     | 110      |  |  | 70-130            | Pass        |                 |
| Endosulfan I                                                | S19-Ja15481   | NCP       | %     | 102      |  |  | 70-130            | Pass        |                 |
| Endosulfan II                                               | S19-Ja15481   | NCP       | %     | 97       |  |  | 70-130            | Pass        |                 |
| Endosulfan sulphate                                         | S19-Ja15481   | NCP       | %     | 73       |  |  | 70-130            | Pass        |                 |
| Endrin aldehyde                                             | S19-Ja15481   | NCP       | %     | 81       |  |  | 70-130            | Pass        |                 |
| Endrin ketone                                               | S19-Ja15481   | NCP       | %     | 98       |  |  | 70-130            | Pass        |                 |
| g-BHC (Lindane)                                             | S19-Ja15481   | NCP       | %     | 113      |  |  | 70-130            | Pass        |                 |
| Heptachlor epoxide                                          | S19-Ja15481   | NCP       | %     | 91       |  |  | 70-130            | Pass        |                 |
| Hexachlorobenzene                                           | S19-Ja15481   | NCP       | %     | 118      |  |  | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |  |  |                   |             |                 |
| <b>Organophosphorus Pesticides</b>                          |               |           |       | Result 1 |  |  |                   |             |                 |
| Diazinon                                                    | M19-Ja19256   | NCP       | %     | 109      |  |  | 70-130            | Pass        |                 |
| Ethion                                                      | M19-Ja19256   | NCP       | %     | 92       |  |  | 70-130            | Pass        |                 |
| Fenitrothion                                                | M19-Ja19256   | NCP       | %     | 89       |  |  | 70-130            | Pass        |                 |
| Methyl parathion                                            | M19-Ja19256   | NCP       | %     | 79       |  |  | 70-130            | Pass        |                 |
| Mevinphos                                                   | M19-Ja19256   | NCP       | %     | 82       |  |  | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |  |  |                   |             |                 |
| <b>Phenols (Halogenated)</b>                                |               |           |       | Result 1 |  |  |                   |             |                 |
| 2-Chlorophenol                                              | M19-Ja16099   | NCP       | %     | 95       |  |  | 30-130            | Pass        |                 |
| 2,4-Dichlorophenol                                          | M19-Ja16099   | NCP       | %     | 85       |  |  | 30-130            | Pass        |                 |
| 2,4,5-Trichlorophenol                                       | M19-Ja16099   | NCP       | %     | 62       |  |  | 30-130            | Pass        |                 |
| 2,4,6-Trichlorophenol                                       | M19-Ja16099   | NCP       | %     | 65       |  |  | 30-130            | Pass        |                 |
| 2,6-Dichlorophenol                                          | M19-Ja16099   | NCP       | %     | 96       |  |  | 30-130            | Pass        |                 |
| 4-Chloro-3-methylphenol                                     | M19-Ja16099   | NCP       | %     | 73       |  |  | 30-130            | Pass        |                 |

| Test                                                        | Lab Sample ID | QA Source | Units | Result 1 |          |     | Acceptance Limits | Pass Limits | Qualifying Code |
|-------------------------------------------------------------|---------------|-----------|-------|----------|----------|-----|-------------------|-------------|-----------------|
| Tetrachlorophenols - Total                                  | M19-Ja16099   | NCP       | %     | 62       |          |     | 30-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |          |     |                   |             |                 |
| <b>Phenols (non-Halogenated)</b>                            |               |           |       | Result 1 |          |     |                   |             |                 |
| 2-Methylphenol (o-Cresol)                                   | M19-Ja16099   | NCP       | %     | 84       |          |     | 30-130            | Pass        |                 |
| 2-Nitrophenol                                               | M19-Ja16099   | NCP       | %     | 110      |          |     | 30-130            | Pass        |                 |
| 2,4-Dimethylphenol                                          | M19-Ja16099   | NCP       | %     | 74       |          |     | 30-130            | Pass        |                 |
| 2,4-Dinitrophenol                                           | M19-Ja16099   | NCP       | %     | 85       |          |     | 30-130            | Pass        |                 |
| 3&4-Methylphenol (m&p-Cresol)                               | M19-Ja16099   | NCP       | %     | 87       |          |     | 30-130            | Pass        |                 |
| Phenol                                                      | M19-Ja16099   | NCP       | %     | 91       |          |     | 30-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |          |     |                   |             |                 |
| <b>Volatile Organics</b>                                    |               |           |       | Result 1 |          |     |                   |             |                 |
| 1,1-Dichloroethene                                          | M19-Ja21656   | NCP       | %     | 70       |          |     | 70-130            | Pass        |                 |
| 1,1,1-Trichloroethane                                       | M19-Ja21656   | NCP       | %     | 93       |          |     | 70-130            | Pass        |                 |
| 1,2-Dichlorobenzene                                         | M19-Ja21656   | NCP       | %     | 111      |          |     | 70-130            | Pass        |                 |
| 1,2-Dichloroethane                                          | M19-Ja21656   | NCP       | %     | 112      |          |     | 70-130            | Pass        |                 |
| Trichloroethene                                             | M19-Ja21656   | NCP       | %     | 79       |          |     | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |          |     |                   |             |                 |
|                                                             |               |           |       | Result 1 |          |     |                   |             |                 |
| Chromium (hexavalent)                                       | M19-Ja24193   | NCP       | %     | 93       |          |     | 70-130            | Pass        |                 |
| Cyanide (total)                                             | M19-Ja18026   | NCP       | %     | 130      |          |     | 70-130            | Pass        |                 |
| Fluoride                                                    | M19-Ja24301   | NCP       | %     | 71       |          |     | 70-130            | Pass        |                 |
| <b>Spike - % Recovery</b>                                   |               |           |       |          |          |     |                   |             |                 |
| <b>Heavy Metals</b>                                         |               |           |       | Result 1 |          |     |                   |             |                 |
| Arsenic                                                     | M19-Ja19256   | NCP       | %     | 121      |          |     | 75-125            | Pass        |                 |
| Cadmium                                                     | M19-Ja19256   | NCP       | %     | 116      |          |     | 75-125            | Pass        |                 |
| Chromium                                                    | M19-Ja19256   | NCP       | %     | 128      |          |     | 75-125            | Fail        | Q08             |
| Copper                                                      | M19-Ja19256   | NCP       | %     | 119      |          |     | 75-125            | Pass        |                 |
| Lead                                                        | M19-Ja19256   | NCP       | %     | 121      |          |     | 75-125            | Pass        |                 |
| Mercury                                                     | M19-Ja19256   | NCP       | %     | 120      |          |     | 70-130            | Pass        |                 |
| Molybdenum                                                  | M19-Ja19256   | NCP       | %     | 125      |          |     | 75-125            | Pass        |                 |
| Nickel                                                      | M19-Ja19256   | NCP       | %     | 120      |          |     | 75-125            | Pass        |                 |
| Selenium                                                    | M19-Ja19256   | NCP       | %     | 117      |          |     | 75-125            | Pass        |                 |
| Silver                                                      | M19-Ja19256   | NCP       | %     | 121      |          |     | 75-125            | Pass        |                 |
| Tin                                                         | M19-Ja19256   | NCP       | %     | 131      |          |     | 75-125            | Fail        | Q08             |
| Zinc                                                        | M19-Ja19256   | NCP       | %     | 117      |          |     | 75-125            | Pass        |                 |
| Test                                                        | Lab Sample ID | QA Source | Units | Result 1 |          |     | Acceptance Limits | Pass Limits | Qualifying Code |
| <b>Duplicate</b>                                            |               |           |       |          |          |     |                   |             |                 |
| <b>Total Recoverable Hydrocarbons - 1999 NEPM Fractions</b> |               |           |       | Result 1 | Result 2 | RPD |                   |             |                 |
| TRH C6-C9                                                   | M19-Ja23156   | NCP       | mg/kg | < 20     | < 20     | <1  | 30%               | Pass        |                 |
| TRH C10-C14                                                 | M19-Ja21646   | NCP       | mg/kg | < 20     | < 20     | <1  | 30%               | Pass        |                 |
| TRH C15-C28                                                 | M19-Ja21646   | NCP       | mg/kg | < 50     | < 50     | <1  | 30%               | Pass        |                 |
| TRH C29-C36                                                 | M19-Ja21646   | NCP       | mg/kg | < 50     | < 50     | <1  | 30%               | Pass        |                 |
| <b>Duplicate</b>                                            |               |           |       |          |          |     |                   |             |                 |
| <b>BTEX</b>                                                 |               |           |       | Result 1 | Result 2 | RPD |                   |             |                 |
| Benzene                                                     | M19-Ja23156   | NCP       | mg/kg | < 0.1    | < 0.1    | <1  | 30%               | Pass        |                 |
| Toluene                                                     | M19-Ja23156   | NCP       | mg/kg | < 0.1    | < 0.1    | <1  | 30%               | Pass        |                 |
| Ethylbenzene                                                | M19-Ja23156   | NCP       | mg/kg | < 0.1    | < 0.1    | <1  | 30%               | Pass        |                 |
| m&p-Xylenes                                                 | M19-Ja23156   | NCP       | mg/kg | < 0.2    | < 0.2    | <1  | 30%               | Pass        |                 |
| o-Xylene                                                    | M19-Ja23156   | NCP       | mg/kg | < 0.1    | < 0.1    | <1  | 30%               | Pass        |                 |
| Xylenes - Total                                             | M19-Ja23156   | NCP       | mg/kg | < 0.3    | < 0.3    | <1  | 30%               | Pass        |                 |

| Duplicate                                            |             |     |       |          |          |     |     |      |
|------------------------------------------------------|-------------|-----|-------|----------|----------|-----|-----|------|
| Total Recoverable Hydrocarbons - 2013 NEPM Fractions |             |     |       | Result 1 | Result 2 | RPD |     |      |
| Naphthalene                                          | M19-Ja23156 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| TRH C6-C10                                           | M19-Ja23156 | NCP | mg/kg | < 20     | < 20     | <1  | 30% | Pass |
| TRH >C10-C16                                         | M19-Ja21646 | NCP | mg/kg | < 50     | < 50     | <1  | 30% | Pass |
| TRH >C16-C34                                         | M19-Ja21646 | NCP | mg/kg | < 100    | < 100    | <1  | 30% | Pass |
| TRH >C34-C40                                         | M19-Ja21646 | NCP | mg/kg | < 100    | < 100    | <1  | 30% | Pass |
| Duplicate                                            |             |     |       |          |          |     |     |      |
| Polycyclic Aromatic Hydrocarbons                     |             |     |       | Result 1 | Result 2 | RPD |     |      |
| Acenaphthene                                         | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Acenaphthylene                                       | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Anthracene                                           | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Benz(a)anthracene                                    | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Benzo(a)pyrene                                       | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Benzo(b&j)fluoranthene                               | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Benzo(g,h,i)perylene                                 | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Benzo(k)fluoranthene                                 | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Chrysene                                             | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Dibenz(a,h)anthracene                                | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Fluoranthene                                         | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Fluorene                                             | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Indeno(1,2,3-cd)pyrene                               | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Naphthalene                                          | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Phenanthrene                                         | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Pyrene                                               | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Duplicate                                            |             |     |       |          |          |     |     |      |
| Organochlorine Pesticides                            |             |     |       | Result 1 | Result 2 | RPD |     |      |
| Chlordanes - Total                                   | M19-Ja19255 | NCP | mg/kg | < 0.1    | < 0.1    | <1  | 30% | Pass |
| 4,4'-DDD                                             | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| 4,4'-DDE                                             | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| 4,4'-DDT                                             | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| a-BHC                                                | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Aldrin                                               | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| b-BHC                                                | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| d-BHC                                                | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Dieldrin                                             | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Endosulfan I                                         | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Endosulfan II                                        | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Endosulfan sulphate                                  | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Endrin                                               | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Endrin aldehyde                                      | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Endrin ketone                                        | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| g-BHC (Lindane)                                      | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Heptachlor                                           | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Heptachlor epoxide                                   | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Hexachlorobenzene                                    | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Methoxychlor                                         | M19-Ja19255 | NCP | mg/kg | < 0.05   | < 0.05   | <1  | 30% | Pass |
| Duplicate                                            |             |     |       |          |          |     |     |      |
| Organophosphorus Pesticides                          |             |     |       | Result 1 | Result 2 | RPD |     |      |
| Azinphos-methyl                                      | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Bolstar                                              | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Chlorfenvinphos                                      | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Chlorpyrifos                                         | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Chlorpyrifos-methyl                                  | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Coumaphos                                            | M19-Ja19255 | NCP | mg/kg | < 2      | < 2      | <1  | 30% | Pass |
| Demeton-S                                            | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |

| Duplicate                      |             |     |       |          |          |     |     |      |
|--------------------------------|-------------|-----|-------|----------|----------|-----|-----|------|
| Organophosphorus Pesticides    |             |     |       | Result 1 | Result 2 | RPD |     |      |
| Demeton-O                      | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Diazinon                       | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Dichlorvos                     | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Dimethoate                     | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Disulfoton                     | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| EPN                            | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Ethion                         | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Ethoprop                       | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Ethyl parathion                | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Fenitrothion                   | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Fensulfothion                  | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Fenthion                       | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Malathion                      | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Merphos                        | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Methyl parathion               | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Mevinphos                      | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Monocrotophos                  | M19-Ja19255 | NCP | mg/kg | < 2      | < 2      | <1  | 30% | Pass |
| Naled                          | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Omethoate                      | M19-Ja19255 | NCP | mg/kg | < 2      | < 2      | <1  | 30% | Pass |
| Phorate                        | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Pirimiphos-methyl              | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Pyrazophos                     | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Ronnel                         | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Terbufos                       | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Tetrachlorvinphos              | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Tokuthion                      | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Trichloronate                  | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| Duplicate                      |             |     |       |          |          |     |     |      |
| Phenols (Halogenated)          |             |     |       | Result 1 | Result 2 | RPD |     |      |
| 2-Chlorophenol                 | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 2,4-Dichlorophenol             | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 2,4,5-Trichlorophenol          | M19-Ja19255 | NCP | mg/kg | < 1      | < 1      | <1  | 30% | Pass |
| 2,4,6-Trichlorophenol          | M19-Ja19255 | NCP | mg/kg | < 1      | < 1      | <1  | 30% | Pass |
| 2,6-Dichlorophenol             | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 4-Chloro-3-methylphenol        | M19-Ja19255 | NCP | mg/kg | < 1      | < 1      | <1  | 30% | Pass |
| Pentachlorophenol              | M19-Ja19255 | NCP | mg/kg | < 1      | < 1      | <1  | 30% | Pass |
| Tetrachlorophenols - Total     | M19-Ja19255 | NCP | mg/kg | < 1      | < 1      | <1  | 30% | Pass |
| Duplicate                      |             |     |       |          |          |     |     |      |
| Phenols (non-Halogenated)      |             |     |       | Result 1 | Result 2 | RPD |     |      |
| 2-Cyclohexyl-4,6-dinitrophenol | M19-Ja19255 | NCP | mg/kg | < 20     | < 20     | <1  | 30% | Pass |
| 2-Methyl-4,6-dinitrophenol     | M19-Ja19255 | NCP | mg/kg | < 5      | < 5      | <1  | 30% | Pass |
| 2-Methylphenol (o-Cresol)      | M19-Ja19255 | NCP | mg/kg | < 0.2    | < 0.2    | <1  | 30% | Pass |
| 2-Nitrophenol                  | M19-Ja19255 | NCP | mg/kg | < 1      | < 1      | <1  | 30% | Pass |
| 2,4-Dimethylphenol             | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 2,4-Dinitrophenol              | M19-Ja19255 | NCP | mg/kg | < 5      | < 5      | <1  | 30% | Pass |
| 3&4-Methylphenol (m&p-Cresol)  | M19-Ja19255 | NCP | mg/kg | < 0.4    | < 0.4    | <1  | 30% | Pass |
| 4-Nitrophenol                  | M19-Ja19255 | NCP | mg/kg | < 5      | < 5      | <1  | 30% | Pass |
| Dinoseb                        | M19-Ja19255 | NCP | mg/kg | < 20     | < 20     | <1  | 30% | Pass |
| Phenol                         | M19-Ja19255 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Duplicate                      |             |     |       |          |          |     |     |      |
|                                |             |     |       | Result 1 | Result 2 | RPD |     |      |
| % Moisture                     | M19-Ja23156 | NCP | %     | 5.2      | 4.7      | 9.0 | 30% | Pass |

| Duplicate                   |             |     |       |          |          |     |     |      |
|-----------------------------|-------------|-----|-------|----------|----------|-----|-----|------|
| Volatile Organics           |             |     |       | Result 1 | Result 2 | RPD |     |      |
| 1.2.4-Trichlorobenzene      | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Hexachlorobutadiene         | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Duplicate                   |             |     |       |          |          |     |     |      |
| Volatile Organics           |             |     |       | Result 1 | Result 2 | RPD |     |      |
| 1.1-Dichloroethane          | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.1-Dichloroethene          | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.1.1-Trichloroethane       | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.1.1.2-Tetrachloroethane   | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.1.2-Trichloroethane       | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.1.2.2-Tetrachloroethane   | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.2-Dibromoethane           | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.2-Dichlorobenzene         | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.2-Dichloroethane          | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.2-Dichloropropane         | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.2.3-Trichloropropane      | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.2.4-Trimethylbenzene      | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.3-Dichlorobenzene         | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.3-Dichloropropane         | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.3.5-Trimethylbenzene      | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 1.4-Dichlorobenzene         | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 2-Butanone (MEK)            | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 2-Propanone (Acetone)       | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 4-Chlorotoluene             | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| 4-Methyl-2-pentanone (MIBK) | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Allyl chloride              | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Bromobenzene                | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Bromochloromethane          | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Bromodichloromethane        | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Bromoform                   | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Bromomethane                | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Carbon disulfide            | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Carbon Tetrachloride        | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Chlorobenzene               | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Chloroethane                | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Chloroform                  | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Chloromethane               | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| cis-1.2-Dichloroethene      | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| cis-1.3-Dichloropropene     | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Dibromochloromethane        | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Dibromomethane              | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Dichlorodifluoromethane     | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Iodomethane                 | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Isopropyl benzene (Cumene)  | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Methylene Chloride          | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Styrene                     | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Tetrachloroethene           | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| trans-1.2-Dichloroethene    | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| trans-1.3-Dichloropropene   | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Trichloroethene             | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Trichlorofluoromethane      | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |
| Vinyl chloride              | M19-Ja23012 | NCP | mg/kg | < 0.5    | < 0.5    | <1  | 30% | Pass |



| Duplicate                                |             |     |          |          |          |      |     |      |
|------------------------------------------|-------------|-----|----------|----------|----------|------|-----|------|
|                                          |             |     |          | Result 1 | Result 2 | RPD  |     |      |
| Chromium (hexavalent)                    | M19-Ja20390 | NCP | mg/kg    | < 1      | < 1      | <1   | 30% | Pass |
| Cyanide (total)                          | M19-Ja17843 | NCP | mg/kg    | < 5      | < 5      | <1   | 30% | Pass |
| Fluoride                                 | M19-Ja14681 | NCP | mg/kg    | 240      | 180      | 31   | 30% | Fail |
| Q15                                      |             |     |          |          |          |      |     |      |
| Duplicate                                |             |     |          |          |          |      |     |      |
| Heavy Metals                             |             |     |          | Result 1 | Result 2 | RPD  |     |      |
| Arsenic                                  | M19-Ja19256 | NCP | mg/kg    | 3.7      | 3.7      | 2.0  | 30% | Pass |
| Cadmium                                  | M19-Ja19256 | NCP | mg/kg    | < 0.4    | < 0.4    | <1   | 30% | Pass |
| Chromium                                 | M19-Ja19256 | NCP | mg/kg    | < 5      | < 5      | <1   | 30% | Pass |
| Copper                                   | M19-Ja19256 | NCP | mg/kg    | < 5      | < 5      | <1   | 30% | Pass |
| Lead                                     | M19-Ja19256 | NCP | mg/kg    | < 5      | < 5      | <1   | 30% | Pass |
| Mercury                                  | M19-Ja19256 | NCP | mg/kg    | < 0.1    | < 0.1    | <1   | 30% | Pass |
| Molybdenum                               | M19-Ja19256 | NCP | mg/kg    | < 5      | < 5      | <1   | 30% | Pass |
| Nickel                                   | M19-Ja19256 | NCP | mg/kg    | < 5      | < 5      | <1   | 30% | Pass |
| Selenium                                 | M19-Ja19256 | NCP | mg/kg    | < 2      | < 2      | <1   | 30% | Pass |
| Silver                                   | M19-Ja19256 | NCP | mg/kg    | < 0.2    | < 0.2    | <1   | 30% | Pass |
| Tin                                      | M19-Ja19256 | NCP | mg/kg    | < 10     | < 10     | <1   | 30% | Pass |
| Zinc                                     | M19-Ja19256 | NCP | mg/kg    | < 5      | < 5      | <1   | 30% | Pass |
| Duplicate                                |             |     |          |          |          |      |     |      |
|                                          |             |     |          | Result 1 | Result 2 | RPD  |     |      |
| pH (1:5 Aqueous extract at 25°C as rec.) | M19-Ja26050 | NCP | pH Units | 8.4      | 8.2      | pass | 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                                                                                                                                                                                                                             |
| Q15  | The RPD reported passes Eurofins   mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.                                                                                                                                                                                                                                                                  |

## Authorised By

|                 |                                |
|-----------------|--------------------------------|
| Mary Makarios   | Analytical Services Manager    |
| Joseph Edouard  | Senior Analyst-Organic (VIC)   |
| Harry Bacalis   | Senior Analyst-Volatile (VIC)  |
| Emily Rosenberg | Senior Analyst-Metal (VIC)     |
| Julie Kay       | 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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## **Appendix G** – Test pit logs



**3136558**



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# PROFILE SHEET

**HOLE No. TP02**

**Client:** Bass Coast Shire Council

**Project:** Wonthaggi North West Growth Area - Targeted Intrusive Investigation

**Location:** Wonthaggi, Victoria

**SHEET 1 OF 1**

**Position:** Property 40

**Surface RL:** N/A

**Processed:** LPS

**Method of Exploration:** 5t Excavator (F&J 041)

**Hole Size:** 0.3m x 1.5m x 1.1m

**Checked:** KA

**Date:** 01/02/19

**Logged by:** KA

**Date:** 04/02/19

| SAMPLES<br>& TESTS | Depth<br>(metres) | Strata | DESCRIPTION                                                                                                                                                            |
|--------------------|-------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                   |        | Moisture, colour, consistency, structure, SOIL TYPE (origin)                                                                                                           |
| TP02_0.1           | 0                 |        | TOPSOIL; Brown clay with silt, trace sand, trace gravel and rootlets. Dry with no odour, no staining and no evidence of asbestos                                       |
|                    | 0.10              |        | CLAY; Brown, with silt, trace sand, trace gravel, some rootlets. Low plasticity, hard, blocky and slightly damp with no odour, no staining and no evidence of asbestos |
|                    | TP02_0.5          |        |                                                                                                                                                                        |
|                    | 0.70              |        | CLAY; Brown to grey, with trace silt, trace sand, trace gravel with orange silty infilling, high plasticity, firm, damp with no odour, no staining                     |
| TP02_1.0           | 1                 |        |                                                                                                                                                                        |
|                    | 1.10              |        |                                                                                                                                                                        |
|                    | 2                 |        |                                                                                                                                                                        |

See standard sheets for  
details of abbreviations  
& basis of descriptions

**Job No.**

**3136558**





MANAGEMENT  
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# PROFILE SHEET

**HOLE No. TP03**

**Client:** Bass Coast Shire Council

**Project:** Wonthaggi North West Growth Area - Targeted Intrusive Investigation

**Location:** Wonthaggi, Victoria

**SHEET 1 OF 1**

**Position:** Property 40

**Surface RL:** N/A

**Processed:** LPS

**Method of Exploration:** 5t Excavator (F&J 041)

**Hole Size:** 0.3m x 1.5m x 1.0m

**Checked:** KA

**Date:** 01/02/19

**Logged by:** KA

**Date:** 04/02/19

| SAMPLES<br>& TESTS | Depth<br>(metres) | Strata | DESCRIPTION                                                                                                                                                                |
|--------------------|-------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    |                   |        | Moisture, colour, consistency, structure, SOIL TYPE (origin)                                                                                                               |
| TP03_0.1           | 0                 |        | TOPSOIL; Brown clay with silt, trace sand, trace gravel, rootlets, dry, no odour, no staining, debris present including metal nails and red brick fragments                |
|                    | 0.10              |        | CLAY; Brown with silt, trace sand, trace gravel, some rootlets, low plasticity, very hard, blocky and slightly damp with no odour, no staining and no evidence of asbestos |
|                    | 0.5               |        |                                                                                                                                                                            |
| TP03_0.7           | 0.70              |        | CLAY; Brown to grey, trace silt, trace sand, trace gravel, orange silty infilling, high plasticity, firm, damp with no odour, no staining                                  |
|                    | 1.00              |        |                                                                                                                                                                            |
| TP03_1.0           | 1                 |        |                                                                                                                                                                            |
|                    | 2                 |        |                                                                                                                                                                            |

See standard sheets for  
details of abbreviations  
& basis of descriptions

**Job No.**

**3136558**



**3136558**



**3136558**



# PROFILE SHEET

**HOLE No. TP06**

**Client:** Bass Coast Shire Council

**Project:** Wonthaggi North West Growth Area - Targeted Intrusive Investigation

**Location:** Wonthaggi, Victoria

**SHEET 1 OF 1**

**Position:** Property 38

**Surface RL:** N/A

**Processed:** LPS

**Method of Exploration:** 5t Excavator (F&J 041)

**Hole Size:** 0.3m x 1.0m x 1.0m

**Checked:** KA

**Date:** 01/02/19

**Logged by:** KA

**Date:** 04/02/19

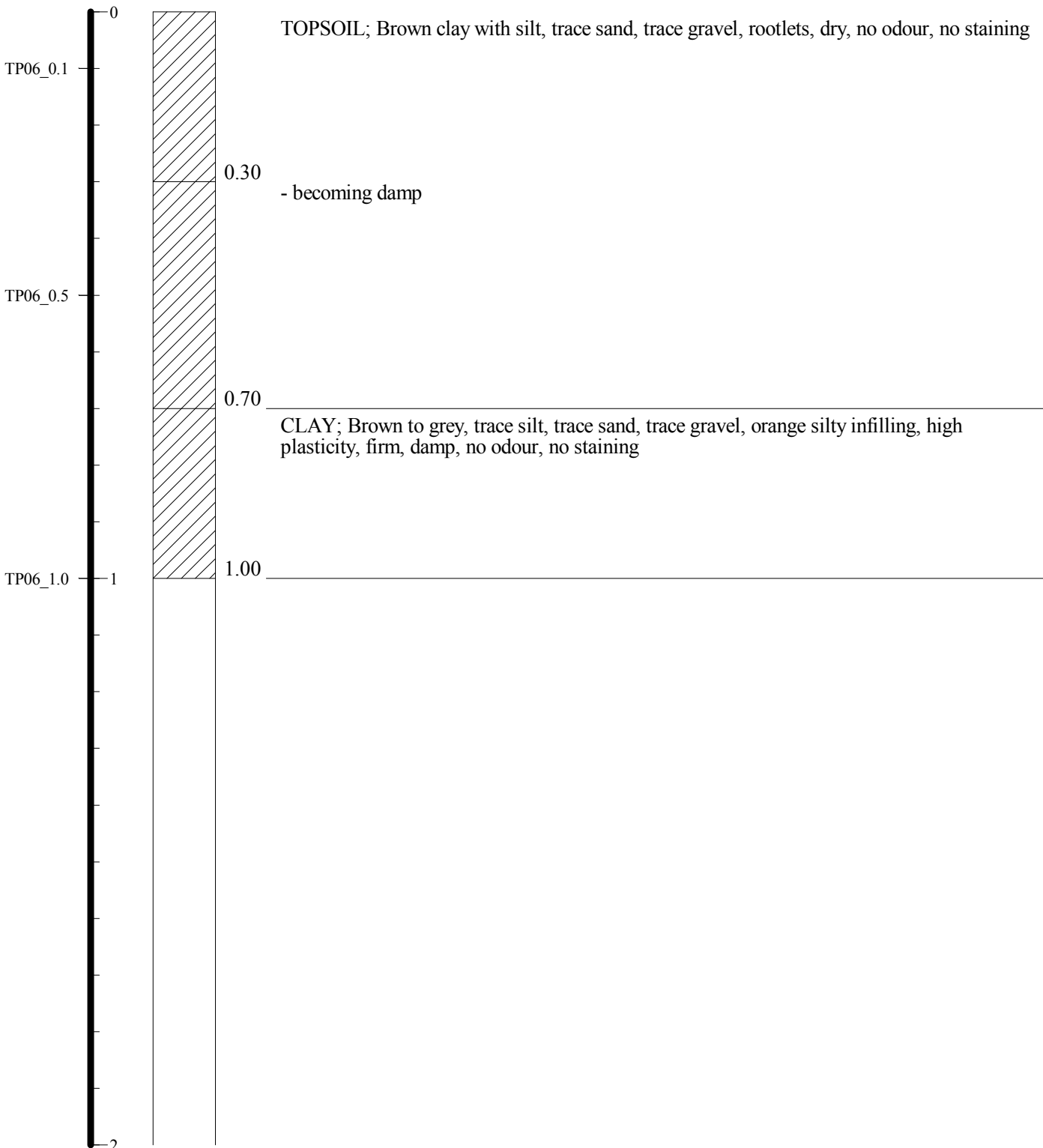
SAMPLES  
& TESTS

Depth  
(metres)

Strata

## DESCRIPTION

Moisture, colour, consistency, structure, SOIL TYPE (origin)



See standard sheets for  
details of abbreviations  
& basis of descriptions

**Job No.**

**3136558**



# PROFILE SHEET

|                                                                                     |                                      |                       |  |
|-------------------------------------------------------------------------------------|--------------------------------------|-----------------------|--|
| <b>Client:</b> Bass Coast Shire Council                                             |                                      | <b>HOLE No. TP07</b>  |  |
| <b>Project:</b> Wonthaggi North West Growth Area - Targeted Intrusive Investigation |                                      | <b>SHEET 1 OF 1</b>   |  |
| <b>Location:</b> Wonthaggi, Victoria                                                |                                      |                       |  |
| <b>Position:</b> Property 38                                                        | <b>Surface RL:</b> N/A               | <b>Processed:</b> LPS |  |
| <b>Method of Exploration:</b> 5t Excavator (F&J 041)                                | <b>Hole Size:</b> 0.3m x 1.5m x 1.0m | <b>Checked:</b> KA    |  |
| <b>Date:</b> 01/02/19                                                               | <b>Logged by:</b> KA                 | <b>Date:</b> 04/02/19 |  |

| SAMPLES & TESTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Depth (metres) | Strata | DESCRIPTION<br>Moisture, colour, consistency, structure, SOIL TYPE (origin)                   |                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <div style="display: flex; align-items: center;"> <div style="width: 10px; height: 100px; border-left: 2px solid black; position: relative;"> <div style="position: absolute; top: 0; left: -5px;">0</div> <div style="position: absolute; bottom: 0; left: -5px;">2</div> </div> <div style="margin-left: 5px;"> <div style="height: 100px; border-left: 1px solid black; border-right: 1px solid black; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; height: 100%; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px);"></div> </div> </div> </div> | 0              |        | TOPSOIL; Brown clay with silt, trace sand, trace gravel, rootlets, dry, no odour, no staining |                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TP07_0.1       |        |                                                                                               |                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TP07_0.5       | 0.50   |                                                                                               | - becoming damp                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TP07_0.7       | 0.70   |                                                                                               | CLAY; Brown to grey, trace silt, trace sand, trace gravel, orange silty infilling, high plasticity, firm, damp, no odour, no staining |
| TP07_1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1              | 1.00   |                                                                                               |                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2              |        |                                                                                               |                                                                                                                                       |

|                                                                          |                                                                                       |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| See standard sheets for details of abbreviations & basis of descriptions | <b>Job No.</b><br><br><div style="font-size: 1.2em; font-weight: bold;">3136558</div> |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------|





# PROFILE SHEET

**HOLE No. TP08**

**Client:** Bass Coast Shire Council

**Project:** Wonthaggi North West Growth Area - Targeted Intrusive Investigation

**Location:** Wonthaggi, Victoria

**SHEET 1 OF 1**

**Position:** Property 38

**Surface RL:** N/A

**Processed:** LPS

**Method of Exploration:** 5t Excavator (F&J 041)

**Hole Size:** 0.3m x 1.5m x 2.0m

**Checked:** KA

**Date:** 01/02/19

**Logged by:** KA

**Date:** 04/02/19

| SAMPLES<br>& TESTS | Depth<br>(metres) | Strata | DESCRIPTION                                                                                                                           |
|--------------------|-------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------|
|                    |                   |        | Moisture, colour, consistency, structure, SOIL TYPE (origin)                                                                          |
| TP08_0.1           | 0                 |        | FILL; Brown clay, with silt, some sand, some gravel, rootlets, dry, no odour, no staining                                             |
|                    | 0.40              |        | - becoming damp                                                                                                                       |
| TP08_0.5           |                   |        |                                                                                                                                       |
|                    | 0.80              |        | FILL; Dark grey to brown clay, with some silt, trace sand, trace gravel, orange iron staining, high plasticity, damp, hard, no odour  |
| TP08_1.0           | 1                 |        |                                                                                                                                       |
|                    | 1.20              |        | CLAY; Brown to grey, trace silt, trace sand, trace gravel, orange silty infilling, high plasticity, damp, firm, no odour, no staining |
| TP08_2.0           | 2                 |        |                                                                                                                                       |

See standard sheets for  
details of abbreviations  
& basis of descriptions

**Job No.**

**3136558**



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# PROFILE SHEET

|                                                                                     |                                      |                       |  |
|-------------------------------------------------------------------------------------|--------------------------------------|-----------------------|--|
| <b>Client:</b> Bass Coast Shire Council                                             |                                      | <b>HOLE No. TP09</b>  |  |
| <b>Project:</b> Wonthaggi North West Growth Area - Targeted Intrusive Investigation |                                      | <b>SHEET 1 OF 1</b>   |  |
| <b>Location:</b> Wonthaggi, Victoria                                                |                                      |                       |  |
| <b>Position:</b> Property 38                                                        | <b>Surface RL:</b> N/A               | <b>Processed:</b> LPS |  |
| <b>Method of Exploration:</b> 5t Excavator (F&J 041)                                | <b>Hole Size:</b> 0.3m x 1.5m x 2.0m | <b>Checked:</b> KA    |  |
| <b>Date:</b> 01/02/19                                                               | <b>Logged by:</b> KA                 | <b>Date:</b> 04/02/19 |  |

| SAMPLES & TESTS | Depth (metres) | Strata | DESCRIPTION<br>Moisture, colour, consistency, structure, SOIL TYPE (origin)                                                           |
|-----------------|----------------|--------|---------------------------------------------------------------------------------------------------------------------------------------|
| TP09_0.1        | 0              |        | FILL; Brown clay, with silt, some sand, some gravel, rootlets, dry, no odour, no staining, no evidence of asbestos                    |
|                 | 0.40           |        | - becoming damp                                                                                                                       |
| TP09_0.5        |                |        |                                                                                                                                       |
|                 | 0.80           |        | CLAY; Brown to grey, trace silt, trace sand, trace gravel, orange silty infilling, high plasticity, firm, damp, no odour, no staining |
| TP09_1.0        | 1              |        |                                                                                                                                       |
|                 | 1.00           |        |                                                                                                                                       |
|                 | 2              |        |                                                                                                                                       |

|                                                                          |                           |
|--------------------------------------------------------------------------|---------------------------|
| See standard sheets for details of abbreviations & basis of descriptions | Job No.<br><b>3136558</b> |
|--------------------------------------------------------------------------|---------------------------|

## **Appendix H** – QA/QC assessment



## Quality assurance / quality control assessment

### 1.1 Laboratories and data set

The soil samples recovered during the targeted intrusive investigation were submitted to ALS Environmental (ALS) and Eurofins | mgt, both of which are National Association of Testing Authorities (NATA) accredited laboratories, accredited to perform the required analysis.

The selected laboratories conducted the requested analyses in accordance with the guidelines outlined in NEPM 2013.

The primary results and quality assurance and quality control (QA/QC) results were reported in laboratory certificates of analysis provided in Appendix F, as set out in Table 1 below.

**Table 1 Laboratory reports**

| Sample Type                                   | Primary Laboratory | Primary Report No.     | Secondary Laboratory | Secondary Report No. |
|-----------------------------------------------|--------------------|------------------------|----------------------|----------------------|
| Soil (Preliminary Surface Soil Investigation) | ALS                | EM1814874              | -                    | -                    |
| Soil (Targeted Intrusive Investigation)       | ALS                | EM1900929<br>EM1901343 | Eurofins   mgt       | 637673-S             |

The data quality assessment detailed in the following pages refers to the data provided in these listed reports.

### 1.2 Data quality indicators

Table 2 below details the QA/QC data quality indicators (DQIs) used in the targeted intrusive investigation and completion status of these indicators.

**Table 2 Summary of QA/QC compliance for soil sampling**

| Item                                         | Objective                                                               | Outcome        | Reference                                                           |
|----------------------------------------------|-------------------------------------------------------------------------|----------------|---------------------------------------------------------------------|
| GHD internal procedures                      |                                                                         |                |                                                                     |
| Comparison of field and analytical data      | Agreement between visual and olfactory evidence with laboratory results | Completed      | ALS/Eurofins   mgt certificates of analysis (Appendix F)            |
| Calibration of field instruments             | Meet calibration specifications                                         | Not Applicable | No equipment required                                               |
| Chain of Custody (COC) documentation         | Supply COC documentation with all samples                               | Completed      | Copies of COC documentation (Appendix F)                            |
| Sample analysis and extraction holding times | Comply with holding times                                               | Completed      | ALS/Eurofins   mgt laboratory quality control reports. (Appendix F) |



| Item                                                     | Objective                                                                                                                            | Outcome                                                                         | Reference                                                                                       |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Analysis of inter and intra-laboratory duplicate samples | Analysis of duplicate samples in 5% of primary samples                                                                               | Completed                                                                       | NEPM 2013, AS4482.1-2005 and US EPA<br>ALS/Eurofins   mgt certificates of analysis (Appendix F) |
| Analysis of trip blank samples                           | Analysis of one trip blank sample per storage container. Reported concentrations to be below the laboratory limit of reporting (LOR) | Completed                                                                       | NEPM 2013<br>ALS/Eurofins   mgt certificates of analysis (Appendix F)                           |
| Laboratory QA/QC procedures                              |                                                                                                                                      |                                                                                 |                                                                                                 |
| Analysis of laboratory method blanks                     | No contamination of blanks.                                                                                                          | Completed                                                                       | ALS/Eurofins   mgt laboratory quality control reports (Appendix F)                              |
| Analysis of laboratory spike recoveries                  | Recoveries within the laboratory specified recovery limits.                                                                          | Completed<br>(see outliers in laboratory quality control reports in Appendix F) | ALS/Eurofins   mgt laboratory quality control reports (Appendix F)                              |
| Analysis of laboratory internal duplicates               | Frequencies and RPDs within guideline and internal laboratory limits (RPD of 0-30%)                                                  | Completed<br>(see outliers in laboratory quality control reports in Appendix F) | NEPM 2013<br>ALS/Eurofins   mgt laboratory quality control reports (Appendix F)                 |

### 1.3 QA/QC assessment method

Established QA/QC procedures to assess data quality were maintained throughout the project. The QA/QC program undertaken as part of the assessment by GHD included the following:

- Use of appropriately qualified and trained staff;
- Preservation of samples with ice during transport from the field to the laboratory;
- Transportation of samples with accompanying chain-of-custody documentation;
- Compliance with sample holding times;
- Review of results of blind duplicate samples;
- Review of results of split duplicate samples;
- Review of results of trip blank samples; and
- Review of internal analysis of laboratory duplicates, spikes and blanks.

The QA/QC program employed during this investigation was in accordance with the general requirements set out in the Australian Standard AS4482.1 (2005). Quality control samples provide information that discounts or potentially identifies errors due to possible sources of cross contamination,





inconsistencies in sampling and analytical techniques used. The quality control program completed included the collection and analysis of trip blank and duplicate samples, these are described below:

- **Split duplicate samples:** These are inter-laboratory duplicate samples split in the field, with one sample being sent to a secondary laboratory for analysis. The same parameters are analysed utilising similar analytical techniques and results are compared to primary laboratory results;
- **Blind duplicate samples:** These are coded duplicate samples submitted to the primary laboratory for analysis as individual samples without any indication to the laboratory that they have been duplicated;
- **Trip blank samples:** A blank sample placed into the ice chest to indicate whether cross contamination has occurred during transport; and

### 1.3.1 Relative percentage difference

A quantitative measure of the accuracy of the duplicate analyses results obtained was made using calculated relative percentage difference (RPD) values. The RPD values were calculated using the following equation.

$$RPD(\%) = \frac{\langle Co - Cs \rangle}{\left\langle \frac{Co + Cs}{2} \right\rangle} \times 100$$

Where       $Co$     =      concentration obtained from the original sample  
               $Cs$     =      concentration obtained from the duplicate sample

## 2 GHD QA/QC

### 2.1 Duplicate samples

During the targeted intrusive investigation, a total of 19 primary soil samples were submitted for analysis. Three blind duplicate and three split duplicate samples were collected and analysed as part of the GHD QA/QC program. The total amount of duplicate samples collected during the assessment satisfies the data quality objective of 5% QA/QC samples to primary samples.

Calculated RPD values for duplicate and split samples are presented in Appendix H, Table 1. RPD values could not be calculated for results reporting values below the laboratory LOR. Of the RPDs calculated, the majority of results were found to be within the RPD limit of 50% with the exception of one results. The RPD exceedance is summarised in Table 3 below.



**Table 3 Quality control sample results**

| Duplicate Sample                        | Primary Sample | Analyte                              | Primary Concentration | Duplicate Concentration | RPD (%) |
|-----------------------------------------|----------------|--------------------------------------|-----------------------|-------------------------|---------|
| Soil – Targeted Intrusive Investigation |                |                                      |                       |                         |         |
| Inter-Laboratory ‘Split’ Duplicate      |                |                                      |                       |                         |         |
| FS03<br>(23/01/2019)                    | TP09_0.1       | Nickel                               | 5                     | 10                      | 67      |
|                                         |                | TRH fraction F3 (>C16-C34)           | 410                   | 150                     | 93      |
|                                         |                | TRH fraction >C10-C40 (Sum of Total) | 550                   | 150                     | 114     |
|                                         |                | TRH fraction >C15-C28                | 170                   | <50                     | 109     |
|                                         |                | TRH fraction >C10-C36 (Sum of total) | 490                   | 140                     | 111     |
| Laboratory Duplicate                    |                |                                      |                       |                         |         |
| FD02<br>(22/01/2019)                    | CS02           | TRH fraction >C10-C40 (Sum of Total) | <50                   | 120                     | 82      |

The majority of the RPD results stated are not considered significant due to the concentrations reported being less than 10x the laboratory limit of reporting (LOR). At these concentrations, small differences in concentration have a large effect on the RPDs calculated, and as such are not considered significant.

## 2.2 Rinsate blank samples

One rinsate sample, RB01, was collected during the surface soil sampling event. This sample was collected from the tool used to collect surface soil samples. The rinsate sample was collected to assess the adequacy of decontamination procedures of the sampling tool between surface sample locations. The rinsate blank sample analytical results were reported below the laboratory LOR indicating adequate decontamination procedures were conducted between surface sample locations. Tabulated rinsate blank sample results are provided in Appendix H, Table 2.

Rinsate blank samples were not required during the targeted intrusive investigation because soil samples were collected from portions of soil uninfluenced by the sampling tool (excavator).

## 2.3 Trip blank samples

Three trip blank samples were collected during the soil sampling events and were analysed for TPH (C<sub>6</sub>-C<sub>10</sub>) and BTEX to assess whether cross contamination of samples was occurring during sample storage and transport.

The trip blank sample results were reported below the laboratory LOR, indicating acceptable storage and transport practices were followed and potential for contamination of samples during storage and transport was minimised. Tabulated trip blank sample results are provided in Appendix H, Table 2.



### **3 Laboratory QA/QC analysis**

Results of the internal laboratory quality control programs are included in the laboratory reports provided in Appendix F. Laboratory quality control outliers were reported including matrix spike recovery outliers and quality control sample frequency outliers. These outliers are not considered to affect the soil analytical results.

### **4 Discussion**

Although there was a minor non-conformance in RPD exceedance, it was likely due to low sample concentration results equating to higher than normal RPDs, and therefore were not seen to affect the integrity of the results.

As the majority of the GHD QA/QC DQIs were within the specified requirements, the data was considered to be valid and of sufficient quality to meet the data quality objectives for the assessment.



Appendix H Table 1  
QA/QC Assessment  
Relative Percentage Difference

Wonthaggi North East Growth Area  
Phase 1 Preliminary Site Investigation

|                                                |          | Location Code | TP02       |            |     | TP02       |     |            |            |     |            | TP09       | TP09       |       | TP09       |      |     |
|------------------------------------------------|----------|---------------|------------|------------|-----|------------|-----|------------|------------|-----|------------|------------|------------|-------|------------|------|-----|
|                                                |          | Date          | 22/01/2019 | 22/01/2019 |     | 22/01/2019 |     | 22/01/2019 | 22/01/2019 |     | 22/01/2019 | 23/01/2019 | 23/01/2019 |       | 23/01/2019 |      |     |
|                                                |          | Field ID      | TP02_0.5   | FD01       |     | FS01       |     | CS02       | FD02       |     | FS02       | TP09_0.1   | FD03       |       | FS03       |      |     |
|                                                |          | Sample Type   | Normal     | Field_D    |     | Interlab_D |     | Normal     | Field_D    |     | Interlab_D | Normal     | Field_D    |       | Interlab_D |      |     |
|                                                |          | Matrix Type   | soil       | soil       | RPD | soil       | RPD | soil       | soil       | RPD | soil       | soil       | soil       | RPD   | soil       | RPD  |     |
|                                                | Unit     | EQL           |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| Inorganics                                     |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| pH (CaCl2)                                     | pH Units | 0.1           |            |            |     |            |     | 5.2        | 5.4        | 4   |            | 4.4        | 4.5        | 2     |            |      |     |
| Cyanide (Total)                                | mg/kg    | 1             |            |            |     |            |     | <1         | <1         | 0   | <5         | 0          | 2          | 2     | 0          | <5   | 0   |
| Major Ions                                     |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| Fluoride                                       | mg/kg    | 40            |            |            |     |            |     | 220        | 260        | 17  | 300        | 31         | 200        | 240   | 18         | 240  | 18  |
| Metals                                         |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| Arsenic                                        | mg/kg    | 2             |            |            |     |            |     | <5         | <5         | 0   | 5.4        | 8          | <5         | <5    | 0          | 2.9  | 0   |
| Cadmium                                        | mg/kg    | 0.4           |            |            |     |            |     | <1         | <1         | 0   | <0.4       | 0          | <1         | <1    | 0          | <0.4 | 0   |
| Chromium (III+VI)                              | mg/kg    | 5             |            |            |     |            |     |            |            |     | 22         |            |            |       |            | 16   |     |
| Chromium (hexavalent)                          | mg/kg    | 0.5           |            |            |     |            |     | <0.5       | <0.5       | 0   | <1         | 0          | <0.5       | <0.5  | 0          | <1   | 0   |
| Copper                                         | mg/kg    | 5             |            |            |     |            |     | 5          | 5          | 0   | 8.2        | 48         | 9          | 10    | 11         | 13   | 36  |
| Lead                                           | mg/kg    | 5             |            |            |     |            |     | 9          | 9          | 0   | 14         | 43         | 12         | 14    | 15         | 16   | 29  |
| Mercury                                        | mg/kg    | 0.1           |            |            |     |            |     | <0.1       | <0.1       | 0   | <0.1       | 0          | <0.1       | <0.1  | 0          | <0.1 | 0   |
| Molybdenum                                     | mg/kg    | 2             |            |            |     |            |     | <2         | <2         | 0   | <5         | 0          | <2         | <2    | 0          | <5   | 0   |
| Nickel                                         | mg/kg    | 2             |            |            |     |            |     | 2          | 2          | 0   | <5         | 0          | 5          | 7     | 33         | 10   | 67  |
| Selenium                                       | mg/kg    | 2             |            |            |     |            |     | <5         | <5         | 0   | <2         | 0          | <5         | <5    | 0          | <2   | 0   |
| Silver                                         | mg/kg    | 0.2           |            |            |     |            |     | <2         | <2         | 0   | <0.2       | 0          | <2         | <2    | 0          | <0.2 | 0   |
| Tin                                            | mg/kg    | 5             |            |            |     |            |     | <5         | <5         | 0   | <10        | 0          | <5         | <5    | 0          | <10  | 0   |
| Zinc                                           | mg/kg    | 5             |            |            |     |            |     | 19         | 22         | 15  | 31         | 48         | 20         | 23    | 14         | 30   | 40  |
| BTEXN                                          |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| Benzene                                        | mg/kg    | 0.1           | <0.2       | <0.2       | 0   | <0.1       | 0   | <0.2       | <0.2       | 0   | <0.1       | 0          | <0.2       | <0.2  | 0          | <0.1 | 0   |
| Toluene                                        | mg/kg    | 0.1           | <0.5       | <0.5       | 0   | <0.1       | 0   | <0.5       | <0.5       | 0   | <0.1       | 0          | <0.5       | <0.5  | 0          | <0.1 | 0   |
| Ethylbenzene                                   | mg/kg    | 0.1           | <0.5       | <0.5       | 0   | <0.1       | 0   | <0.5       | <0.5       | 0   | <0.1       | 0          | <0.5       | <0.5  | 0          | <0.1 | 0   |
| Xylene (o)                                     | mg/kg    | 0.1           | <0.5       | <0.5       | 0   | <0.1       | 0   | <0.5       | <0.5       | 0   | <0.1       | 0          | <0.5       | <0.5  | 0          | <0.1 | 0   |
| Xylene (m & p)                                 | mg/kg    | 0.2           | <0.5       | <0.5       | 0   | <0.2       | 0   | <0.5       | <0.5       | 0   | <0.2       | 0          | <0.5       | <0.5  | 0          | <0.2 | 0   |
| Xylene Total                                   | mg/kg    | 0.3           | <0.5       | <0.5       | 0   | <0.3       | 0   | <0.5       | <0.5       | 0   | <0.3       | 0          | <0.5       | <0.5  | 0          | <0.3 | 0   |
| Naphthalene (BTEXN)                            | mg/kg    | 0.5           |            |            |     | <0.5       |     |            |            |     | <0.5       |            |            |       |            | <0.5 |     |
| BTEX (Sum of Total) - Lab Calc                 | mg/kg    | 0.2           | <0.2       | <0.2       | 0   |            |     |            |            |     |            |            |            |       |            |      |     |
| TRH - NEPM 2013                                |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| F1 (C6-C10 minus BTEX)                         | mg/kg    | 10            | <10        | <10        | 0   | <20        | 0   | <10        | <10        | 0   | <20        | 0          | <10        | <10   | 0          | <20  | 0   |
| C6-C10 Fraction                                | mg/kg    | 10            | <10        | <10        | 0   | <20        | 0   | <10        | <10        | 0   | <20        | 0          | <10        | <10   | 0          | <20  | 0   |
| F2 (>C10-C16 minus Naphthalene)                | mg/kg    | 50            | <50        | <50        | 0   | <50        | 0   | <50        | <50        | 0   | <50        | 0          | <50        | <50   | 0          | <50  | 0   |
| >C10-C16 Fraction                              | mg/kg    | 50            | <50        | <50        | 0   | <50        | 0   | <50        | <50        | 0   | <50        | 0          | <50        | <50   | 0          | <50  | 0   |
| F3 (>C16-C34 Fraction)                         | mg/kg    | 100           | <100       | <100       | 0   | <100       | 0   | 120        | 160        | 29  | <100       | 18         | 410        | 350   | 16         | 150  | 93  |
| F4 (>C34-C40 Fraction)                         | mg/kg    | 100           | <100       | <100       | 0   | <100       | 0   | <100       | <100       | 0   | <100       | 0          | 140        | 130   | 7          | <100 | 33  |
| >C10-C40 (Sum of Total)                        | mg/kg    | 50            | <50        | <50        | 0   | <100       | 0   | 120        | 160        | 29  | <100       | 18         | 550        | 480   | 14         | 150  | 114 |
| TRH - NEPM 1999                                |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| C6-C9 Fraction                                 | mg/kg    | 10            | <10        | <10        | 0   | <20        | 0   | <10        | <10        | 0   | <20        | 0          | <10        | <10   | 0          | <20  | 0   |
| C10-C14 Fraction                               | mg/kg    | 20            | <50        | <50        | 0   | <20        | 0   | <50        | <50        | 0   | <20        | 0          | <50        | <50   | 0          | <20  | 0   |
| C15-C28 Fraction                               | mg/kg    | 50            | <100       | <100       | 0   | <50        | 0   | <100       | <100       | 0   | <50        | 0          | 170        | 150   | 12         | <50  | 109 |
| C29-C36 Fraction                               | mg/kg    | 50            | <100       | <100       | 0   | <50        | 0   | <100       | 120        | 18  | <50        | 0          | 320        | 270   | 17         | 140  | 78  |
| C10-C36 (Sum of Total)                         | mg/kg    | 50            | <50        | <50        | 0   | <50        | 0   | <50        | 120        | 82  | <50        | 0          | 490        | 420   | 15         | 140  | 111 |
| PAHs                                           |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| Sum of polycyclic aromatic hydrocarbons        | mg/kg    | 0.5           |            |            |     |            |     | <0.5       | <0.5       | 0   |            |            | <0.5       | <0.5  | 0          |      |     |
| Acenaphthene                                   | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Acenaphthylene                                 | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Anthracene                                     | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Benz(a)anthracene                              | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Benzo(b+j+k)fluoranthene                       | mg/kg    | 0.5           |            |            |     |            |     | <0.5       | <0.5       | 0   |            |            | <0.5       | <0.5  | 0          |      |     |
| Benzo(a) pyrene                                | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Benzo(b+j)fluoranthene                         | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   |            |            |     | <0.5       |            |            |       |            | <0.5 |     |
| Benzo(k)fluoranthene                           | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   |            |            |     | <0.5       |            |            |       |            | <0.5 |     |
| Benzo(g,h,i)perylene                           | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Chrysene                                       | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Dibenz(a,h)anthracene                          | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Fluoranthene                                   | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Naphthalene                                    | mg/kg    | 0.5           | <0.5       | <0.5       | 0   |            |     | <0.5       | <0.5       | 0   |            |            | <0.5       | <0.5  | 0          |      |     |
| Fluorene                                       | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Indeno(1,2,3-c,d)pyrene                        | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Naphthalene-PAH                                | mg/kg    | 0.5           |            |            |     | <0.5       |     |            |            |     | <0.5       |            |            |       |            | <0.5 |     |
| Phenanthrene                                   | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Pyrene                                         | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| PAHs (Sum of total) - Lab calc                 | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   |            |            |     | <0.5       |            |            |       |            | <0.5 |     |
| Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.5       | <0.5       | 0   | <0.5       | 0          | <0.5       | <0.5  | 0          | <0.5 | 0   |
| Total 8 PAHs (as BaP TEQ)(half LOR) - Lab Calc | mg/kg    | 0.5           | 0.6        | 0.6        | 0   | 0.6        | 0   | 0.6        | 0.6        | 0   | 0.6        | 0          | 0.6        | 0.6   | 0          | 0.6  | 0   |
| Total 8 PAHs (as BaP TEQ)(full LOR) - Lab Calc | mg/kg    | 0.5           | 1.2        | 1.2        | 0   | 1.2        | 0   | 1.2        | 1.2        | 0   | 1.2        | 0          | 1.2        | 1.2   | 0          | 1.2  | 0   |
| Phenols                                        |          |               |            |            |     |            |     |            |            |     |            |            |            |       |            |      |     |
| 3,4-Methylphenol (m,p-cresol)                  | mg/kg    | 0.4           | <1         | <1         | 0   | <0.4       | 0   | <1         | <1         | 0   | <0.4       | 0          | <1         | <1    | 0          | <0.4 | 0   |
| Phenols(halogenated) - Lab Calc                | mg/kg    | 0.03          |            |            |     |            |     | <0.03      | <0.03      | 0   |            |            | <0.03      | <0.03 | 0          |      |     |
| Phenols (non-halogenated) - Lab Calc           | mg/kg    | 1             |            |            |     |            |     | <1         | <1         | 0   |            |            | <1         | <1    | 0          |      |     |
| 2,3,5,6-Tetrachlorophenol                      | mg/kg    | 0.03          |            |            |     |            |     | <0.03      | <0.03      | 0   |            |            | <0.03      | <0.03 | 0          |      |     |
| 2,4,5-trichlorophenol                          | mg/kg    | 0.05          | <0.5       | <0.5       | 0   | <1         | 0   | <0.05      | <0.05      | 0   | <1         | 0          | <0.05      | <0.05 | 0          | <1   | 0   |
| 2,4,6-trichlorophenol                          | mg/kg    | 0.05          | <0.5       | <0.5       | 0   | <1         | 0   | <0.05      | <0.05      | 0   | <1         | 0          | <0.05      | <0.05 | 0          | <1   | 0   |
| 2,4-dichlorophenol                             | mg/kg    | 0.03          | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.03      | <0.03      | 0   | <0.5       | 0          | <0.03      | <0.03 | 0          | <0.5 | 0   |
| 2,4-dimethylphenol                             | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <0.5       | 0   | <1         | <1         | 0   | <0.5       | 0          | <1         | <1    | 0          | <0.5 | 0   |
| 2,4-dinitrophenol                              | mg/kg    | 5             |            |            |     | <5         |     | <5         | <5         | 0   | <5         | 0          | <5         | <5    | 0          | <5   | 0   |
| 2,6-dichlorophenol                             | mg/kg    | 0.03          | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.03      | <0.03      | 0   | <0.5       | 0          | <0.03      | <0.03 | 0          | <0.5 | 0   |
| 2,3,4,5 & 2,3,4,6-Tetrachlorophenol            | mg/kg    | 0.05          |            |            |     |            |     | <0.05      | <0.05      | 0   |            |            | <0.05      | <0.05 | 0          |      |     |
| 2-chlorophenol                                 | mg/kg    | 0.03          | <0.5       | <0.5       | 0   | <0.5       | 0   | <0.03      | <0.03      | 0   | <0.5       | 0          | <0.03      | <0.03 | 0          | <0.5 | 0   |
| 2-methylphenol                                 | mg/kg    | 0.2           | <0.5       | <0.5       | 0   | <0.2       | 0   | <1         | <1         | 0   | <0.2       | 0          | <1         | <1    | 0          | <0.2 | 0   |
| 2-nitrophenol                                  | mg/kg    | 0.5           | <0.5       | <0.5       | 0   | <1         | 0   | <1         | <1         | 0   | <1         | 0          | <1         | <1    | 0          | <1   | 0   |
| 4,6-Dinitro-2-methylphenol                     | mg/kg    | 5             |            |            |     | <5         |     | <5         | <5         | 0   | <5         | 0          | <5         | <5    | 0          | <5   | 0   |
| 4,6-Dinitro-o-cyclohexyl phenol                | mg/kg    | 5             |            |            |     | <20        |     | <5         | <5         | 0   | <20        | 0          | <5         | <5    | 0          | <20  | 0   |
| 4-chloro-3-methylphenol                        | mg/kg    | 0.3           | <0.5       | <0.5       | 0   | <1         | 0   | <0.03      | <0.03      | 0   | <1         | 0          | <0.03      | <0.03 | 0          | <1   | 0   |
| 4-nitrophenol                                  | mg/kg    | 5             |            |            |     | <5         |     | <5         | <5         | 0   | <5         | 0          | <5         | <5    | 0          | <5   | 0   |
| Pentachlorophenol                              | mg/kg    | 0.2           | <2         | <2         | 0   | <1         | 0   | <0.2       | <0.2       | 0   | <1         | 0          | <          |       |            |      |     |





Appendix H Table 1  
QA/QC Assessment  
Relative Percentage Difference

Wonthaggi North East Growth Area  
Phase 1 Preliminary Site Investigation

|                        |       |      | Location Code |            | TP02       |       |   | TP02       |     |            |            |       |            | TP09 | TP09       |            | TP09 |            |     |
|------------------------|-------|------|---------------|------------|------------|-------|---|------------|-----|------------|------------|-------|------------|------|------------|------------|------|------------|-----|
|                        |       |      | Date          | 22/01/2019 | 22/01/2019 |       |   | 22/01/2019 |     | 22/01/2019 | 22/01/2019 |       | 22/01/2019 |      | 23/01/2019 | 23/01/2019 |      | 23/01/2019 |     |
|                        |       |      | Field ID      | TP02_0.5   | FD01       |       |   | FS01       |     | CS02       | FD02       |       | FS02       |      | TP09_0.1   | FD03       |      | FS03       |     |
|                        |       |      | Sample Type   | Normal     | Field_D    |       |   | Interlab_D |     | Normal     | Field_D    |       | Interlab_D |      | Normal     | Field_D    |      | Interlab_D |     |
|                        |       |      | Matrix Type   | soil       | soil       | RPD   |   | soil       | RPD | soil       | soil       | RPD   | soil       | RPD  | soil       | soil       | RPD  | soil       | RPD |
|                        | Unit  | EQL  |               |            |            |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Chlordane (cis)        | mg/kg | 0.03 | <0.05         | <0.05      | 0          |       |   |            |     | <0.03      | <0.03      | 0     |            |      | <0.03      | <0.03      | 0    |            |     |
| Chlordane (trans)      | mg/kg | 0.03 | <0.05         | <0.05      | 0          |       |   |            |     | <0.03      | <0.03      | 0     |            |      | <0.03      | <0.03      | 0    |            |     |
| d-BHC                  | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| 4,4 DDD                | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.05      | <0.05      | 0     | <0.05      | 0    | <0.05      | <0.05      | 0    | <0.05      | 0   |
| 4,4 DDT                | mg/kg | 0.05 | <0.2          | <0.2       | 0          | <0.05 | 0 | <0.05      | 0   | <0.05      | <0.05      | 0     | <0.05      | 0    | <0.05      | <0.05      | 0    | <0.05      | 0   |
| DDT+DDE+DDD - Lab Calc | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.05      | <0.05      | 0     | <0.05      | 0    | <0.05      | <0.05      | 0    | <0.05      | 0   |
| Dieldrin               | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Endosulfan             | mg/kg | 0.05 | <0.05         | <0.05      | 0          |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Endosulfan I (alpha)   | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Endosulfan II (beta)   | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Endosulfan Sulfate     | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Endrin                 | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Endrin aldehyde        | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Endrin ketone          | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.05 | 0 |            |     |            |            | <0.05 |            |      |            |            |      | <0.05      |     |
| g-BHC (Lindane)        | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Heptachlor             | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Heptachlor epoxide     | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Hexachlorobenzene      | mg/kg | 0.03 | <0.05         | <0.05      | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Methoxychlor           | mg/kg | 0.03 | <0.2          | <0.2       | 0          | <0.05 | 0 | <0.05      | 0   | <0.03      | <0.03      | 0     | <0.05      | 0    | <0.03      | <0.03      | 0    | <0.05      | 0   |
| Toxaphene              | mg/kg | 1    |               |            |            |       |   | <1         |     |            |            |       | <1         |      |            |            |      | <1         |     |
| OP Pesticides          |       |      |               |            |            |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Tokuthion              | mg/kg | 0.2  |               |            |            |       |   | <0.2       |     |            |            |       |            |      |            |            |      |            |     |
| Azinphos methyl        | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Bolstar (Sulprofos)    | mg/kg | 0.2  |               |            |            |       |   | <0.2       |     |            |            |       |            |      |            |            |      |            |     |
| Bromophos-ethyl        | mg/kg | 0.05 | <0.05         | <0.05      | 0          |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Carbophenothion        | mg/kg | 0.05 | <0.05         | <0.05      | 0          |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Chlorfenvinphos        | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Chlorpyrifos           | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Chlorpyrifos-methyl    | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Coumaphos              | mg/kg | 2    |               |            |            | <2    |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Demeton-O              | mg/kg | 0.2  |               |            |            |       |   | <0.2       |     |            |            |       |            |      |            |            |      |            |     |
| Demeton-S              | mg/kg | 0.2  |               |            |            |       |   | <0.2       |     |            |            |       |            |      |            |            |      |            |     |
| Demeton-S-methyl       | mg/kg | 0.05 | <0.05         | <0.05      | 0          |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Diazinon               | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Dichlorvos             | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Dimethoate             | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Disulfoton             | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| EPN                    | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Ethion                 | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Ethoprop               | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Fenamiphos             | mg/kg | 0.05 | <0.05         | <0.05      | 0          |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Fenitrothion           | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Fensulfothion          | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Fenthion               | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Malathion              | mg/kg | 0.05 | <0.05         | <0.05      | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Merphos                | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Methyl parathion       | mg/kg | 0.2  | <0.2          | <0.2       | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Mevinphos (Phosdrin)   | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Monocrotophos          | mg/kg | 0.2  | <0.2          | <0.2       | 0          | <2    | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Naled (Dibrom)         | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Omethoate              | mg/kg | 2    |               |            |            | <2    |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Parathion              | mg/kg | 0.2  | <0.2          | <0.2       | 0          | <0.2  | 0 |            |     |            |            |       |            |      |            |            |      |            |     |
| Phorate                | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Pirimphos-ethyl        | mg/kg | 0.05 | <0.05         | <0.05      | 0          |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Pirimphos-methyl       | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Prothiofos             | mg/kg | 0.05 | <0.05         | <0.05      | 0          |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Pyrazophos             | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Ronnel                 | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Terbufos               | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Trichloronate          | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| Tetrachlorvinphos      | mg/kg | 0.2  |               |            |            | <0.2  |   |            |     |            |            |       |            |      |            |            |      |            |     |
| MAH                    |       |      |               |            |            |       |   |            |     |            |            |       |            |      |            |            |      |            |     |
| 1,2,4-trimethylbenzene | mg/kg | 0.5  |               |            |            |       |   |            |     |            |            | <0.5  |            |      |            |            |      | <0.5       |     |
| 1,3,5-trimethylbenzene | mg/kg | 0.5  |               |            |            |       |   |            |     |            |            | <0.5  |            |      |            |            |      | <0.5       |     |
| Isopropylbenzene       | mg/kg | 0.5  |               |            |            |       |   |            |     |            |            | <0.5  |            |      |            |            |      | <0.5       |     |
| MAH (Sum of Total)     | mg/kg | 0.2  |               |            |            |       |   |            |     | <0.2       | <0.2       | 0     |            |      | <0.2       | <0.2       | 0    |            |     |
| Styrene                | mg/kg | 0.5  |               |            |            |       |   |            |     | <0.5       | <0.5       | 0     | <0.5       | 0    | <0.5       | <0.5       | 0    | <0.5       | 0   |
| Total MAH              | mg/kg | 0.5  |               |            |            |       |   |            |     |            |            | <0.5  |            |      |            |            |      | <0.5       |     |
| Halogenated            |       |      |               |            |            |       |   |            |     |            |            |       |            |      |            |            |      |            |     |





Appendix H Table 2  
QA/QC Assessment  
Rinsate and Trip Blanks

Wonthaggi North East Growth Area  
Phase 1 Preliminary Site Investigation

|                 |                                                | Location Code |            |            |            |            |
|-----------------|------------------------------------------------|---------------|------------|------------|------------|------------|
|                 |                                                | Date          | 13/09/2018 | 13/09/2018 | 22/01/2019 | 23/01/2019 |
|                 |                                                | Field ID      | RB01       | TB01       | TB01       | TB02       |
|                 |                                                | Sample Type   | Rinsate    | Trip_B     | Trip_B     | Trip_B     |
|                 |                                                | Matrix Type   | water      | water      | water      | water      |
|                 |                                                | Unit          |            |            |            |            |
| Metals          |                                                |               |            |            |            |            |
|                 | Arsenic                                        | mg/L          | <0.001     |            |            |            |
|                 | Cadmium                                        | mg/L          | <0.0001    |            |            |            |
|                 | Chromium (III+VI)                              | mg/L          | <0.001     |            |            |            |
|                 | Copper                                         | mg/L          | <0.001     |            |            |            |
|                 | Lead                                           | mg/L          | <0.001     |            |            |            |
|                 | Mercury                                        | mg/L          | <0.0001    |            |            |            |
|                 | Nickel                                         | mg/L          | <0.001     |            |            |            |
|                 | Zinc                                           | mg/L          | <0.005     |            |            |            |
| BTEXN           |                                                |               |            |            |            |            |
|                 | Benzene                                        | µg/L          | <1         | <1         | <1         | <1         |
|                 | Toluene                                        | µg/L          | <2         | <2         | <2         | <2         |
|                 | Ethylbenzene                                   | µg/L          | <2         | <2         | <2         | <2         |
|                 | Xylene (o)                                     | µg/L          | <2         | <2         | <2         | <2         |
|                 | Xylene (m & p)                                 | µg/L          | <2         | <2         | <2         | <2         |
|                 | Xylene Total                                   | µg/L          | <2         | <2         | <2         | <2         |
|                 | BTEX (Sum of Total) - Lab Calc                 | µg/L          | <1         | <1         | <1         | <1         |
| TRH - NEPM 2013 |                                                |               |            |            |            |            |
|                 | F1 (C6-C10 minus BTEX)                         | µg/L          | <20        | <20        | <20        | <20        |
|                 | C6-C10 Fraction                                | µg/L          | <20        | <20        | <20        | <20        |
|                 | F2 (>C10-C16 minus Naphthalene)                | µg/L          | <100       |            |            |            |
|                 | >C10-C16 Fraction                              | µg/L          | <100       |            |            |            |
|                 | F3 (>C16-C34 Fraction)                         | µg/L          | <100       |            |            |            |
|                 | F4 (>C34-C40 Fraction)                         | µg/L          | <100       |            |            |            |
|                 | >C10-C40 (Sum of Total)                        | µg/L          | <100       |            |            |            |
| TRH - NEPM 1999 |                                                |               |            |            |            |            |
|                 | C6-C9 Fraction                                 | µg/L          | <20        | <20        | <20        | <20        |
|                 | C10-C14 Fraction                               | µg/L          | <50        |            |            |            |
|                 | C15-C28 Fraction                               | µg/L          | <100       |            |            |            |
|                 | C29-C36 Fraction                               | µg/L          | <50        |            |            |            |
|                 | C10-C36 (Sum of Total)                         | µg/L          | <50        |            |            |            |
| PAHs            |                                                |               |            |            |            |            |
|                 | Acenaphthene                                   | µg/L          | <1.0       |            |            |            |
|                 | Acenaphthylene                                 | µg/L          | <1.0       |            |            |            |
|                 | Anthracene                                     | µg/L          | <1.0       |            |            |            |
|                 | Benzo(a)anthracene                             | µg/L          | <1.0       |            |            |            |
|                 | Benzo(a) pyrene                                | µg/L          | <0.5       |            |            |            |
|                 | Benzo[b+j]fluoranthene                         | µg/L          | <1.0       |            |            |            |
|                 | Benzo(k)fluoranthene                           | µg/L          | <1.0       |            |            |            |
|                 | Benzo(g,h,i)perylene                           | µg/L          | <1.0       |            |            |            |
|                 | Chrysene                                       | µg/L          | <1.0       |            |            |            |
|                 | Dibenz(a,h)anthracene                          | µg/L          | <1.0       |            |            |            |
|                 | Fluoranthene                                   | µg/L          | <1.0       |            |            |            |
|                 | Naphthalene                                    | µg/L          | <1.0       | <5         | <5         | <5         |
|                 | Fluorene                                       | µg/L          | <1.0       |            |            |            |
|                 | Indeno(1,2,3-c,d)pyrene                        | µg/L          | <1.0       |            |            |            |
|                 | Phenanthrene                                   | µg/L          | <1.0       |            |            |            |
|                 | Pyrene                                         | µg/L          | <1.0       |            |            |            |
|                 | PAHs (Sum of total) - Lab calc                 | µg/L          | <0.5       |            |            |            |
|                 | Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc | µg/L          | <0.5       |            |            |            |
| Phenols         |                                                |               |            |            |            |            |
|                 | 3,4-Methylphenol (m,p-cresol)                  | µg/L          | <2.0       |            |            |            |
|                 | 2,4,5-trichlorophenol                          | µg/L          | <1.0       |            |            |            |
|                 | 2,4,6-trichlorophenol                          | µg/L          | <1.0       |            |            |            |
|                 | 2,4-dichlorophenol                             | µg/L          | <1.0       |            |            |            |
|                 | 2,4-dimethylphenol                             | µg/L          | <1.0       |            |            |            |
|                 | 2,6-dichlorophenol                             | µg/L          | <1.0       |            |            |            |
|                 | 2-chlorophenol                                 | µg/L          | <1.0       |            |            |            |
|                 | 2-methylphenol                                 | µg/L          | <1.0       |            |            |            |
|                 | 2-nitrophenol                                  | µg/L          | <1.0       |            |            |            |
|                 | 4-chloro-3-methylphenol                        | µg/L          | <1.0       |            |            |            |
|                 | Pentachlorophenol                              | µg/L          | <2.0       |            |            |            |
|                 | Phenol                                         | µg/L          | <1.0       |            |            |            |
| OC Pesticides   |                                                |               |            |            |            |            |
|                 | 4,4-DDE                                        | µg/L          | <0.5       |            |            |            |
|                 | a-BHC                                          | µg/L          | <0.5       |            |            |            |
|                 | Aldrin                                         | µg/L          | <0.5       |            |            |            |
|                 | Aldrin + Dieldrin                              | µg/L          | <0.5       |            |            |            |
|                 | b-BHC                                          | µg/L          | <0.5       |            |            |            |
|                 | Chlordane                                      | µg/L          | <0.5       |            |            |            |
|                 | Chlordane (cis)                                | µg/L          | <0.5       |            |            |            |
|                 | Chlordane (trans)                              | µg/L          | <0.5       |            |            |            |
|                 | d-BHC                                          | µg/L          | <0.5       |            |            |            |
|                 | 4,4 DDD                                        | µg/L          | <0.5       |            |            |            |
|                 | 4,4 DDT                                        | µg/L          | <2.0       |            |            |            |
|                 | DDT+DDE+DDD - Lab Calc                         | µg/L          | <0.5       |            |            |            |
|                 | Dieldrin                                       | µg/L          | <0.5       |            |            |            |
|                 | Endosulfan I (alpha)                           | µg/L          | <0.5       |            |            |            |
|                 | Endosulfan II (beta)                           | µg/L          | <0.5       |            |            |            |
|                 | Endosulfan Sulfate                             | µg/L          | <0.5       |            |            |            |
|                 | Endrin                                         | µg/L          | <0.5       |            |            |            |
|                 | Endrin aldehyde                                | µg/L          | <0.5       |            |            |            |
|                 | Endrin ketone                                  | µg/L          | <0.5       |            |            |            |
|                 | g-BHC (Lindane)                                | µg/L          | <0.5       |            |            |            |
|                 | Heptachlor                                     | µg/L          | <0.5       |            |            |            |
|                 | Heptachlor epoxide                             | µg/L          | <0.5       |            |            |            |
|                 | Hexachlorobenzene                              | µg/L          | <0.5       |            |            |            |
|                 | Methoxychlor                                   | µg/L          | <2.0       |            |            |            |
| OP Pesticides   |                                                |               |            |            |            |            |
|                 | Azinphos methyl                                | µg/L          | <0.5       |            |            |            |
|                 | Bromophos-ethyl                                | µg/L          | <0.5       |            |            |            |
|                 | Carbophenothion                                | µg/L          | <0.5       |            |            |            |
|                 | Chlorfenvinphos                                | µg/L          | <0.5       |            |            |            |
|                 | Chlorpyrifos                                   | µg/L          | <0.5       |            |            |            |
|                 | Chlorpyrifos-methyl                            | µg/L          | <0.5       |            |            |            |
|                 | Demeton-S-methyl                               | µg/L          | <0.5       |            |            |            |
|                 | Diazinon                                       | µg/L          | <0.5       |            |            |            |
|                 | Dichlorvos                                     | µg/L          | <0.5       |            |            |            |
|                 | Dimethoate                                     | µg/L          | <0.5       |            |            |            |
|                 | Ethion                                         | µg/L          | <0.5       |            |            |            |
|                 | Fenamiphos                                     | µg/L          | <0.5       |            |            |            |
|                 | Fenthion                                       | µg/L          | <0.5       |            |            |            |
|                 | Malathion                                      | µg/L          | <0.5       |            |            |            |
|                 | Methyl parathion                               | µg/L          | <2.0       |            |            |            |
|                 | Monocrotophos                                  | µg/L          | <2.0       |            |            |            |
|                 | Parathion                                      | µg/L          | <2.0       |            |            |            |
|                 | Pirimphos-ethyl                                | µg/L          | <0.5       |            |            |            |
|                 | Prothiofos                                     | µg/L          | <0.5       |            |            |            |

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Document Status

| Revision | Author  | Reviewer |                                                                                     | Approved for Issue |                                                                                       |            |
|----------|---------|----------|-------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|------------|
|          |         | Name     | Signature                                                                           | Name               | Signature                                                                             | Date       |
| 0        | K. Auch | S. Sibio |  | S. Sibio           |  | 09/05/2019 |
|          |         |          |                                                                                     |                    |                                                                                       |            |
|          |         |          |                                                                                     |                    |                                                                                       |            |

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