

Targeted Phase II Detailed Site Investigation

4-10 Talavera Road, Macquarie Park NSW

04-Dec-2024

Project Apollo Data Centre (4-10 Talavera Road, Macquarie Park)

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Targeted Phase II Detailed Site Investigation

4-10 Talavera Road, Macquarie Park NSW

Client: Goodman Property Services Australia Pty Ltd

ABN: 40 088 981 793

Prepared by

AECOM Australia Pty Ltd

Gadigal Country, Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia

T +61 1800 868 654 www.aecom.com

ABN 20 093 846 925

04-Dec-2024

Job No.: 60687982

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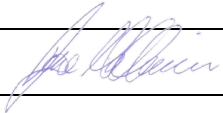
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Executive Summary

AECOM Australia Pty Ltd (AECOM) was commissioned by Goodman Property Services (Australia) Pty Ltd (GPSA) to undertake a Targeted Phase II Detailed Site Investigation (Targeted Phase II) at 4-10 Talavera Road, Macquarie Park NSW 2113. The Site location and site layout are presented in **Figure F1** and **F2, Appendix A**.

This Targeted Phase II report has been prepared by AECOM to accompany a State Significant Development Application (SSDA) for the construction and ongoing operation of a data centre facility at 4-10 Talavera Road, Macquarie Park in the Ryde Council Local Government Area (LGA). The site is legally described as Lot 11 in Deposited Plan 733881, Lot 4 in Deposited Plan 1031467 and Lots 10 and 11 in Deposited Plan 883750.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the Project Apollo Data Centre Project (SSD-74069708) dated 2 August 2024.

The overall project objective is to evaluate the potential for soil contamination to be present at the Site and assess its suitability for commercial land use.

The objectives of the targeted Phase II are to:

- Address data gaps identified in the Phase I PSI
- Assess the potential for soil contamination to be present at the Site and assess its suitability for continued commercial land use
- Provide an indicative waste classification of fill and / or natural soils that may require off-site disposal.
- Determine whether a Remediation Action Plan (RAP) is required for redevelopment activities.

To achieve the objectives, the scope of work separated into two tasks and include:

- Task 1: Ground penetrating radar (GPR) investigation to locate potential historical underground storage tanks (USTs)
- Task 2: Fill Characterisation including drilling of up to 6 boreholes across the Site to characterise the fill and underlying natural material across the Site.

The GPR survey in the area where the former tanks were noted to be as well as in vicinity of the existing buildings did not indicate the presence of the USTs and the results from the sample location in this vicinity were all less than the laboratory limit of reporting and/or adopted assessment criteria indicating that the material in vicinity of the former USTs is unlikely to be impacted. Based on the targeted sampling there isn't much fill and concentrations are less than the assessment criteria

As summarised in the updated conceptual site model, the contamination risk to subsurface workers is considered to be low, as there is no complete SPR linkage due to the soil CoPC being less than the adopted assessment criteria for human health and ecological receptors.

Given that impacts have not been identified as a result of the completed scope of works, a RAP is not recommended for future redevelopment of that Stage 1 Site. Based on the available data, the results from the investigation indicate that the subsurface material would have an indicative classification of General Solid Waste.

This report concludes that the proposed data centre is suitable and warrants approval subject to the implementation of the following mitigation measures:

- The proposed development is conducted under a Construction Environmental Management Plan (CEMP) incorporating an Unexpected Finds Protocol (UFP). The CEMP should identify environmental controls required including but not limited to noise, erosion, dust, waste, unexpected finds including potentially contaminated fill which may contain asbestos or heavy metals. This document will provide the information and management required should unexpected contamination be encountered.

- Development of a Fill Importation Protocol (FIP) if significant importation of material is required. The FIP would provide procedures to follow so that potentially contaminated material isn't imported and placed at the site during construction activities.

Following the implementation of the above mitigation measures, the remaining impacts are appropriate.

1.0 Introduction

AECOM Australia Pty Ltd (AECOM) was commissioned by Goodman Property Services (Australia) Pty Ltd (GPSA) to undertake a Targeted Phase II Detailed Site Investigation (Targeted Phase II) at 4-10 Talavera Road, Macquarie Park NSW 2113. The Site location and site layout are presented in **Figure F1** and **F2, Appendix A**.

This Targeted Phase II report has been prepared by AECOM to accompany a State Significant Development Application (SSDA) for the construction and ongoing operation of a data centre facility at 4-10 Talavera Road, Macquarie Park in the Ryde Council Local Government Area (LGA). The site is legally described as Lot 11 in Deposited Plan 733881, Lot 4 in Deposited Plan 1031467 and Lots 10 and 11 in Deposited Plan 883750.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the Project Apollo Data Centre Project (SSD-74069708) dated 2 August 2024.

AECOM understands that GPSA is redeveloping the Site and requires an assessment of contamination prior to construction works. In July 2022, AECOM undertook a Phase I Preliminary Site Investigation (Phase I PSI) at the Site (AECOM, 2024), which identified that soil and / or groundwater contamination could be present at the Site based on the historical presence of underground storage tanks (USTs) and potential uncontrolled fill. It was therefore recommended that a targeted Phase II DSI be undertaken to assess the potential extent of contamination present in vicinity of the former UST location.

A desktop environmental screening report was provided by Land Insight and Resources (LIR) (LIR, 2022) which included database searches, historical aerial images and maps which show the Site in relation to:

- Sensitive receptors
- Zoning and planning controls
- Soil landscapes and acid sulfate soils
- Geology and topography
- Registered groundwater bores
- Potentially contaminating activities
- Heritage listed sites

The LIR report was included in the Phase I PSI (AECOM, 2024) and is relevant to this Targeted Phase II.

This Targeted Phase II report has been prepared by AECOM to accompany a State Significant development application (SSDA) for a proposed warehouse and distribution centre development located at 4-10 Talavera Road, Macquarie Park (the site).

As summarised in **Table 1 SEARs requirements**

Item	Description of Requirement	Report Reference
17. Contamination and Remediation	In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.	Detailed Site Investigation: All of Report

below, this report has also been prepared to address the relevant the Secretary's Environmental Assessment Requirements (SEARs) issued for SSD-46011220 on 2 August 2022.

Table 1 SEARs requirements

Item	Description of Requirement	Report Reference
17. Contamination and Remediation	In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.	Detailed Site Investigation: All of Report

1.1 Project Description

An SSDA has been prepared in support of a data centre at 4-10 Talavera Road, Macquarie Park. The site comprises four individual allotments totalling approximately 25,211m² in area, is zoned E3 Productivity Support.

The proposal will include:

- Site preparation works including demolition, bulk excavation and removal of existing structures on the site, tree and vegetation clearing and bulk earthworks
- Construction, fit out and operation of five-storey, 135MVA data centre tower with a maximum building height of 45m and total gross floor area of approximately 29,668m² comprising:
 - 60 at-grade parking spaces
 - Two (2) loading dock spaces
 - Four (4) levels of technical data hall floor space with two (2) data halls per floor
 - Ancillary office space and amenities on Lower Ground Level
 - Offices and amenities located from Mezzanine Level to Level 5
- Provision of required utilities including:
 - Eleven (11) in-ground diesel storage tanks
 - Five (5) above-ground water tanks
 - Three (3) 33kV switch-rooms on site
- Vehicle and pedestrian access provided via Talavera Road
- Associated landscaping and site servicing
- Installation of site services and drainage infrastructure
- A floor space ratio of approximately 1.18:1.

1.2 The Site

The site is located in Darug Land and is in Macquarie Park within the City of Ryde Local Government Area (LGA). It is bound by Talavera Road to the south, Lane Cove Road to the east, the Macquarie Technology Park to the west and the M2 Motorway to the north.

The site is located within the Macquarie Park Corridor which is a significant economic and employment precinct in Sydney's North District. The Macquarie Park Corridor contains a range of land uses including Abbot Laboratories medical device company, Ryde Resource Recovery Centre, Excelsia College, Macquarie Shopping Centre, North Ryde Meriton Suits and Macquarie University.

The site comprises four individual allotments totalling 25,111m². It is currently occupied by two warehouse buildings with ancillary offices space that is utilised for storage and distribution purposes.

The closest residential uses to the site are approx. 100m north of the site across the M2 Motorway and 115m to the north-east of the site at Fontenoy Road, Macquarie Park.

The site is well serviced by transport and is within close proximity to Lane Cove Road and M2 Motorway. The site is approximately 430m north of the Macquarie Park Metro station which is on the Sydney Metro City and Southwest line. This provides access to Chatswood, Sydney CBD and south-west beyond to Bankstown.



Figure 1 Site Aerial

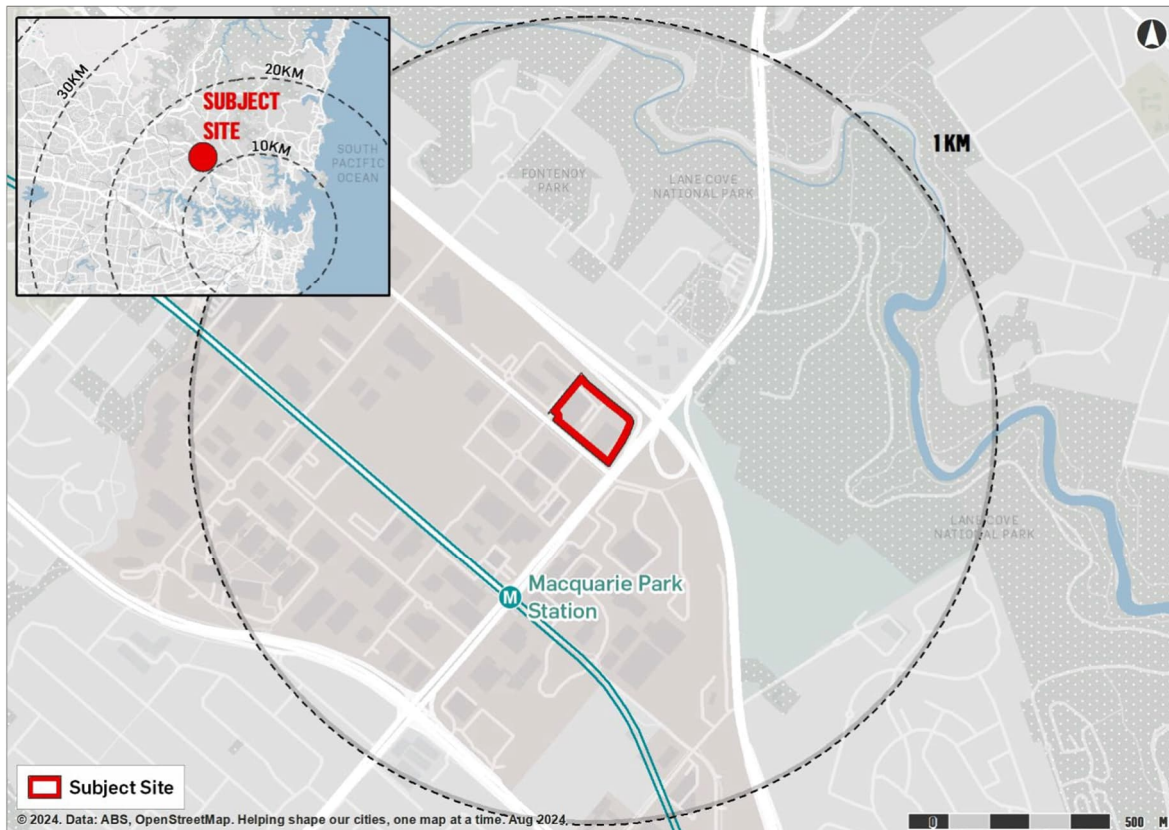


Figure 2 Local Context

1.3 Objectives

The project objective is to evaluate the potential for soil contamination to be present at the Site and assess its suitability for commercial land use.

The objectives of the Targeted Phase II are to:

- Address data gaps identified in the Phase I PSI
- Assess the potential for soil contamination to be present at the Site and assess its suitability for continued commercial land use
- Provide an indicative waste classification of fill and / or natural soils that may require off-site disposal.
- Determine whether a Remediation Action Plan (RAP) is required for redevelopment activities.

1.4 Scope of Work

To achieve the objectives, the scope of work was separated into two tasks and include:

- Task 1: Ground penetrating radar (GPR) investigation to locate potential historical USTs
- Task 2: Fill Characterisation including drilling of up to 6 boreholes across the Site to characterise the fill and underlying natural material across the Site

1.5 Relevant Policy and Guidance Documents

AECOM has prepared this Targeted Phase II with reference to the following guidelines:

- *National Environment Protection Assessment of Site Contamination) Measure 1999 as amended (2013) (the ASC NEPM).*

- NSW EPA (2014). *Waste Classification Guidelines – Part 1: Classifying Waste*. November 2014
- NSW EPA (2017). *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd Edition)*. October.
- NSW EPA (2020). *Consultants reporting on contaminated land, contaminated land guidelines*. April, updated 5 May 2020.
- Department of Urban Affairs and Planning. 1998. State Environmental Planning Policy (SEPP) 55¹ – Remediation of Land.

¹ SEPP55 has been repealed and is essentially Chapter 4 of State Environmental Planning Policy (Resilience and Hazards) 2021.

2.0 Site Identification

2.1 Site description

Site identification details are presented in **Table 2**.

Table 2 Site Identification

Item	Description
Site address	4-10 Talavera Road Macquarie Park, NSW 2113 (Figure F1, Appendix A)
Parcel/ Lot Numbers	Lot 11 in DP733881 Lot 4 in DP 1031467 Lot 10 in DP 883750 Lot 11 in DP 883750
Ownership details	Trust Company of Australia Limited
Site area	Approximately 23,140 m²
Site features	- The Site is fully paved and consists of 2 large office/warehouse buildings surrounded by carparks to the north, east and west. - The south features lawns and footpaths and fronts Talavera Road. - The Site is located on a slope which falls to the south-west towards Talavera Road and then to the south-east.
Ecological Receptors	- Tunks Hill picnic area, a recreation ground within Lane Cove National Park, is approximately 400 m to the east - The Lane Cove River is located approximately 650 m to the east of the Site

2.2 Current land use

The site is currently occupied by a number of existing commercial office buildings and light industrial warehouses (utilised for storage and distribution purposes) located across the various lots which make up the broader site. The land zoning is B7 – Business Park, as per the Ryde Local Environment Plan (LEP) 2014.

2.3 Surrounding land use

Land use surrounding the Site included:

- North: M2 Motorway followed by medium and high density and residential properties
- East: Lane Cove Road followed by commercial properties
- South: Talavera Road followed by commercial properties
- West: 12-16 Talavera Road and 38 Talavera Road, Macquarie Park – GPSA commercial property.

3.0 Site History

A number of historical reports were provided by GPSA for review in completing the Phase I report (AECOM, 2024), which included:

- Technical Due Diligence Report for 4 Talavera Road by New Environment Oct, 2000
- Hazardous Material Survey of Talavera Business Park 4 Talavera Road by HLA-Envirosciences Apr, 2005 and
- UPSS Stage 1 inspection for 4 Talavera Road by AECOM Nov, 2011
- UPSS Stage 1 inspection for 6-10 Talavera Road by AECOM Nov 2011

A brief summary of these findings, and the Phase I (AECOM, 2024) report, is provided below.

3.1.1 Technical Due Diligence – New Environment Oct 2000

New Environment (2000) completed a limited investigation to assess the potential for below ground contamination and extent of hazardous material above ground and to highlight potential issues of concern. It included review of an HLA-Envirosciences (2000) Stage 1 Environmental Assessment and Hazardous Material Survey and referenced earlier reports by Woodward-Clyde (1999) and IT Environmental (1999). None of these reports were available for review as part of this Phase I.

The New Environment report found that the presence of hazardous materials such as lead paint and asbestos would likely be low, however older electrical equipment, electrical backing boards and original fire doors may contain asbestos. The substation located on the southern exterior of the building may contain Polychlorinated Biphenyl (PCB) filled transformers. Hazardous chemicals were stored on Site and noted should be managed as per licence conditions.

The following was stated based on the review of HLA-Envirosciences (2000):

The HLA-Envirosciences report concluded that based on their investigation and previous soil investigations, the site was suitable for ongoing commercial/industrial landuse. Recommendations made included:

1. *Installation of a groundwater monitoring well down gradient of the UST's for groundwater sampling and analysis.*
2. *Confirmation of the UST's decommissioning be provided to WorkCover.*

It was also noted that the IT and Woodward-Clyde below ground investigations did not find any samples exceeding the commercial / industrial criteria present at the time of the report, however based on suspected UST presence (2 USTs were licensed by WorkCover until 1991 but not found) on the Site localised contamination may be present, but was not assessed as part of this report.

3.1.2 Hazardous Material Survey – HLA-Envirosciences Apr 2005

HLA completed a hazardous material survey at 4 Talavera Road in 2005, inspecting the interior and exterior of the existing office / warehouse building. The findings of the survey included:

- No asbestos based construction materials observed, however electric heating elements were present and the insulation within may contain asbestos, however it was unable to be accessed.
- Synthetic Mineral Fibre (SMF) was present in numerous locations throughout the building used as insulation material. The SMF was observed to be in good condition and not considered to be a hazard for general use of the building.
- No PCB containing capacitors were sighted.

3.1.3 UPSS Stage 1 inspection – 4 Talavera Road AECOM 2011

AECOM undertook an inspection of 4 Talavera Road to evaluate for the presence of UPSS infrastructure and if identified the operational status – active, passive or decommissioned. The findings of the inspection indicated that no obvious indicators of the presence of UPSS were identified.

3.1.4 UPSS Stage 1 inspection – 6-10 Talavera Road AECOM 2011

AECOM undertook an inspection of 6-10 Talavera Road to evaluate for the presence of UPSS infrastructure and if identified the operational status – active, passive or decommissioned. The findings of the inspection indicated that no obvious indicators of the presence of UPSS were identified.

3.1.5 Phase I PSI – 4-10 Talavera Road, Macquarie Park NSW AECOM 2024

In July 2022, AECOM undertook a Phase I PSI at Talavera Business Park, which involved a Site walkover of the site to evaluate the potential for soil and/or groundwater contamination to be present and assess its suitability for ongoing commercial use. The findings of the Phase I PSI are below:

- The unknown nature of former USTs that were present at the Site present a potential contamination risk. However, contamination is unlikely to be widespread given no overt signs of contamination were observed and the clayey nature of the soil would likely limit the spread of contamination from the USTs (if still present)
- The extent of potential uncontrolled fill materials that may be present across the Site

It was recommended that the following be undertaken:

- A targeted Phase II investigation in vicinity of the UST infrastructure if the DG report indicates that USTs are still present, or were not decommissioned adequately
- Development is conducted under a Construction Environmental Management Plan (CEMP) incorporating an Unexpected Finds Protocol (UFP)
- Development of a Fill Importation Protocol (FIP) if significant importation of material is required. The FIP would provide procedures to follow so that potentially contaminated material isn't imported and placed at the Site during construction activities.

4.0 Site Condition and Surrounding Environment

4.1 Geology and Soil

The local geological and hydrogeological information is summarised in **Table 3** and was detailed within the Phase I PSI (AECOM, 2024).

Table 3 Soil and geological information

Item	Description
Topography	The Site lies at an elevation ranging from approximately 50 – 60 m Australian Height Datum (AHD) with a slight gradient towards the south-west and west.
Soil	The soil landscape as noted in LIR (2022) is residual soils consisting of moderately deep, hard setting yellow podzolic soils.
Geology	LIR (2022) indicates that the geology at the Site consists of middle Triassic age Ashfield Shale and Hawkesbury sandstone, black to light grey shale and laminate. Medium to coarse grained quartz sandstone with minor shale and laminate lenses.
Acid Sulfate Soil	LIR (2022) indicates that acid sulfate soils (ASS) risk is extremely low probability of occurrence.

4.2 Hydrology and Hydrogeology

The following is noted with regard to hydrology and hydrogeology:

- The closest water body is the Lane Cove River, located approximately 650 m east of the Site
- There are 38 registered groundwater bores within a 2 km radius of the Site (LIR, 2022). All are listed for monitoring purposes with exception of three listed as “irrigated agriculture”
- Groundwater bores range from 230 m to 1,997 m from the Site
- Groundwater depths based on the borelog data of the closest monitoring wells indicates groundwater ranges from approximately 18 m to 38 m depth at these bore locations
- LIR (2022) indicates that the aquifer beneath the Site is porous, extensive aquifers of low to moderate productivity and the hydrogeologic unit is late Permian / Triassic sediments (porous media – consolidated).

Groundwater flow is anticipated to flow in an easterly direction towards Lane Cove River, approximately 650 m east of the Site.

4.3 Preliminary Conceptual Site Model

The following Preliminary Conceptual Site Model (PSCM) is taken directly from the AECOM Phase I PSI (2024).

A Conceptual Site Model (CSM) is a qualitative description of the mechanisms by which potential and/or complete exposure pathways may exist between known or potential sources of contamination, and human or environmental receptors. In order for a human receptor to be exposed to a contaminant derived from the Site, a complete exposure pathway must exist. An exposure pathway may include the following elements:

- A source and mechanism of chemical release
- A retention or transport medium (or media where contaminants are transferred between media)
- A point of potential human contact with the contaminated media
- An exposure route (e.g. ingestion, inhalation) at the point of exposure.

Where one or more of the above elements is missing, the exposure pathway is considered to be incomplete and therefore, there is considered to be no direct risk to the receptors. Where this is identified, the exposure pathway does not warrant further assessment. Where a plausible linkage may exist or has the potential to exist, the exposure pathway is considered further in terms of risk assessment. Based on the results of this Phase I PSI and in accordance with the ASC NEPM, a preliminary CSM has been developed for the Site. The CSM is outlined in the sections below.

4.3.1 Potential sources of contamination

4.3.1.1 On-site

Based on the historical reports review, aerial photos, database searches and site inspection there do not appear to be any overt signs of contamination present at the Stage 1 Site. However, based on the historical report by New Environment, there is the potential for 2 decommissioned or abandoned USTs to be present on Site and associated infrastructure (pipes and vents). These are noted to be 9000 L and 20,000 L in size. If present and not decommissioned properly they have the potential to contribute to localised soil and groundwater contamination.

The nature of fill used in the development of the Site may also be a source of contamination and the historical agricultural use. Based on these potential sources the contaminants of potential concern (COPCs) identified at the Site are:

- Asbestos: associated with uncontrolled fill
- Heavy metals: associated with uncontrolled fill or leaks from USTs
- Total recoverable hydrocarbons (TRH): associated with leaks from USTs
- Benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN): associated with leaks from USTs
- Polycyclic aromatic hydrocarbons (PAH): associated with leaks from USTs and uncontrolled fill
- Phenols: associated with leaks from USTs
- Organochlorine pesticides (OCP) and organophosphate pesticides (OPP): associated with past agricultural land use and uncontrolled fill

4.3.1.2 Off-site

The area surrounding the Site to the west, south and north contain commercial and industrial entities that may be potentially contaminating based on LIR (2022) however with no obvious signs of contamination present on the Site the likelihood of potentially contaminating activities having an impact on Site is low.

4.3.2 Contaminants of Potential Concern

Based on available information with regards to the current and proposed use of the Site and the current land uses of the surrounding area, the following human receptors have been identified:

- On-Site and off-site commercial workers
- On-Site intrusive (i.e. ground excavation) maintenance and construction workers (e.g. demolition contractors);

The following human exposure pathways may apply:

- i. Dermal contact and incidental ingestion of soil;
- ii. Inhalation of soil derived dust in indoor and/or outdoor air;
- iii. Dermal contact and incidental ingestion of groundwater/surface water;
- iv. Inhalation of soil and groundwater vapours in indoor air
- v. Inhalation of soil and groundwater/surface water vapours in outdoor air
- vi. Inhalation of soil and groundwater vapours within a trench.

Based on the physical and chemical parameters of the CoPC identified in the exposure pathways that may be relevant to each CoPC are presented in **Table 4**.

Table 4 CoPC and Relevant Pathways

CoPC	Relevant Pathways
Metals and OCP/OPP	i, ii, iii
TRH, BTEXN, PAHs, phenols	i, ii, iii, iv, v, vi
Asbestos	ii
PCBs	i, iii

4.3.3 Potential Ecological Receptors and Exposure Pathways

Ecological receptors on-site appear restricted to small vegetation areas that are present across the Site as the majority of the Site is paved. These receptors are unlikely to be affected by groundwater, given the expected depth of groundwater on-site and the small size of the vegetation, however shallow fill is likely to exist on-site. It is understood that subterranean biota may pass through the layer, however, it would not be considered a typical habitat. As such, it is not considered that the presence of the fill layer would cause a negative impact on the overall ecological properties of the Site.

The following off-site potential ecological receptors are present within a 1 km radius:

- Lane Cove River located approximately 650 m to the north and east of the Site

4.3.4 Potential Phase I PSI Data Gaps

Based on the assessment of historical review of ownership, photos and business activities the following data gaps were identified:

- The location and total number of USTs that may be present on site
- the extent of potential uncontrolled fill that may be present. However, given no obvious signs of contamination were encountered during the Site inspection, a UFP should be used during redevelopment of the Site to address contamination, if encountered.

5.0 Assessment Methodology

5.1 Data Quality Objectives

The amended National Environmental Protection Measure (NEPM, Schedule B [2]) Guideline on Site Characterisation (2013) specifies that the nature and quality of the data produced in an investigation will be determined by the Data Quality Objectives (DQOs). As referenced by the NEPM, the DQO process is detailed in the United States Environmental Protection Agency (US EPA) *Guidance on Systematic Planning Using the Data Quality Objectives Process (EPA QA/G-4: EPA/240/B-06/001)*, February 2006.

The US EPA defines the process as ‘a strategic planning approach based on the Scientific Method that is used to prepare for a data collection activity. It provides a systematic procedure for defining the criteria that a data collection design should satisfy, including when to collect samples, where to collect samples, the tolerable level of decision errors for the study, and how many samples to collect’.

The process of establishing appropriate DQOs is defined according to the following seven steps:

Table 5 The seven steps in defining DQOs

Step	Data Quality Objective Step
1	State the problem – Define the problem that necessitates the study; identify the planning team, examine budget, schedule.
2	Identify the goal of the study – State how environmental data will be used in meeting objectives and solving the problem, identify study questions, define alternative outcomes.
3	Identify information inputs – Identify data and information needed to answer study questions.
4	Define the boundaries of the study – Specify the target population and characteristics of interest, define spatial and temporal limits, scale of inference.
5	Develop the analytic approach – Define the parameter of interest, specify the type of inference, and develop the logic for drawing conclusions from findings.
6	Specify performance or acceptance criteria – Develop performance criteria for new data being collected or acceptable criteria for existing data being considered for use.
7	Develop the plan for obtaining data – Select the resource-effective sampling and analysis plan that meets the performance criteria.

The approach adopted relative to the seven steps presented above is discussed below.

5.1.1 Step 1 – State the Problem

5.1.1.1 Define the problem that necessitates the study

GPSA is redeveloping the Site and require an assessment of contamination and potential development of a RAP. The Phase I PSI (AECOM, 2024) indicated the potential for unknown USTs and potentially contaminated fill materials to be present at the Site.

The soil data collected from this investigation will provide a more detailed understanding of the extent of potential contamination at the Site. The data will inform the extent that remediation may be required to mitigate potential contamination exposure risks, if present.

5.1.2 Step 2 – Identify the goal of the study

The decision / goal represents the key steps / issues that need to be reviewed / considered in order to resolve the problem identified in Step 1.

The primary questions to be addressed include the following:

- What is the nature, extent, concentration, and distribution of contaminants in soil on the Site, if present?
- Is the Site suitable for continued commercial / industrial land use during and following redevelopment?

- Are the data collected are adequate to subsequently be used in informing the need for remediation and what form it might take, if required?

5.1.3 Step 3 – Identify Information Inputs

To allow assessment of the data against the study goals listed in Step 2, the following will be considered:

- Zoning and current land use of the Site and surrounding properties
- Distance to potential human health and environmental receptors
- Field results and observations
- Laboratory results
- Assessment of the suitability of the data through the assessment of data quality indicators (DQIs), namely precision, accuracy, representativeness, completeness and comparability (PARCC) parameters; and
- Other information sources available to AECOM as referred to throughout this report, including the Phase I (AECOM, 2024) and LIR report (2022) and as detailed in **Section 3.0**

5.1.4 Step 4 – Define the boundaries of the study

The spatial boundaries are:

- **Lateral:** The boundaries of the Site are Lot 11 in DP733881, Lot 4 in DP1031467, Lot 10 in DP883750 and Lot 11 in DP883750, and are outlined on **Figure F1, Appendix A**.
- **Vertical:** Soil bores advanced to minimum 0.5 m into natural soils.
- **Temporal:** The time frame of the field investigation was 22 August 2022.

5.1.5 Step 5 – Develop an analytical approach

The decision rules can be defined as:

- If the laboratory quality assurance/quality control data are within the acceptable ranges, the data will be considered suitable for use; and
- If the CoPC are reported at concentrations greater than the laboratory limit of reporting (LOR) in one or more samples, then it will be considered whether further assessment or management measures are required.
- The decision on the acceptance of the analytical data will be made on the basis of the DQIs as follows:
 - **Precision:** A quantitative measure of the variability (or reproducibility) of data;
 - **Accuracy:** A quantitative measure of the closeness of reported data to the “true” value;
 - **Representativeness:** The confidence (expressed qualitatively) that data are representative of each media sampled;
 - **Completeness:** A measure of the amount of useable data from a data collection activity; and
 - **Comparability:** The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event.

5.1.5.1 Precision

Suitable criteria and/or performance indicators for assessment of precision include:

- Performance of intra-laboratory duplicate sample sets through calculation of relative percent differences (RPDs);
- Performance of inter-laboratory duplicate sample sets through calculation of RPDs; and

- The RPDs will be assessed as acceptable if less than or equal to 30% as per the NEPM Schedule B3. Where the results show greater than 30% difference, a review of the cause will be conducted (NEPM, 2013). It is noted that RPDs that exceed this range may be considered acceptable where:
 - Results are less than 10 times the LOR (no limit);
 - Results are less than 20 times the LOR and the RPD is less than 50%; and
 - Heterogeneous materials are encountered.

5.1.5.2 Accuracy (Bias)

The closeness of the reported data to the “true” value is assessed through review of performance of:

- Method blanks, which are analysed for the analytes requested for in the primary samples;
- Matrix spikes and surrogate recoveries; and
- Laboratory control samples.

5.1.5.3 Representativeness

To ensure the data produced by the laboratory are representative of conditions encountered in the field, the following steps were taken by the laboratory, and subsequently reviewed by AECOM:

- Blank samples were run in parallel with field samples to confirm there are no unacceptable instances of laboratory cross-contamination;
- RPD values for field and laboratory duplicates were reviewed to provide an indication that the samples are generally homogeneous, with no unacceptable instances of significant sample matrix heterogeneity; and
- The appropriateness of collection methodologies, handling, storage and preservation techniques were assessed to ensure/confirm there was minimal opportunity for sample interference or degradation (e.g. volatile loss during transport due to incorrect preservation / transport methods).

5.1.5.4 Completeness

In validating the degree of completeness of the analytical data sets acquired during the program, the following is considered:

- Whether standard operating procedures (SOPs) for sampling protocols have been adhered to; and
- Copies of all Chain of Custody (CoC) documentation were reviewed and presented.

It can therefore be considered whether the proportion of “useable data” generated in the data collection activities is sufficient for the purposes of assessing the problem as stated in Step 1 above.

5.1.5.5 Comparability

Given that assessment data can comprise several data sets from separate sampling events (for example, future soil or waste classification investigations, issues of comparability between data sets are reduced through adherence to SOPs and regulator endorsed or made guidelines and standards on each data gathering activity.

In addition, the data was collected by experienced AECOM field staff, and NATA accredited laboratories were employed in all laboratory programs for soil analysis.

5.1.6 Step 6 – Specify performance or acceptance criteria

Specific limits for this project are in accordance with the appropriate guidance made or endorsed by state and national regulations, appropriate indicators of data quality, and standard procedures for field sampling and handling.

This step also examines the certainty of conclusive statements based on the available new site data collected. This should include the following points to quantify tolerable limits:

- A decision can be made based on a certainty assumption of 95% confidence in any given data set. A limit on the decision error will be 5% that a conclusive statement may be a false positive or false negative.

- A decision error in the context of the decision rule presented above would lead to either underestimation or overestimation of the risk level associated with a particular sampling area. Decision errors may include:
- Sampling errors may occur when the sampling program does not adequately detect the variability of a contaminant from point to point across the Study Area. To address this, the proposal outlined minimum numbers of samples to be collected from each media and this was adhered to with some minor deviations, in this investigation.
- Limitations in ability to acquire useful and representative information from the data collected. The data are proposed to be collected from multiple locations and sample media. For example,
 - Inability to collect surface water and sediment samples at the same location.
- Measurement errors can occur during sample collection, handling, preparation, analysis and data reduction. To address this, the following measures were implemented:
 - Field staff followed SOPs when undertaking sampling, including decontamination of tools, removal of adhered sediment to avoid false positives in results, and use of appropriate sample containers and preservation methods;
 - Laboratories followed a standard procedure when preparing samples for analysis and undertaking analysis; and
 - Laboratories reported quality assurance/ quality control data for comparison with the DQIs established for the project.

Should the performance or acceptance criteria not be met, AECOM will immediately notify GPSA and discuss the next steps to achieve the objectives of this investigation.

5.1.7 Step 7 – Optimise the design for obtaining data

The methodology presented in this investigation is designed to meet the objectives described in **Section 1.1** and to achieve the nominated DQOs. Optimisation of the data collection process was achieved by:

- Working closely with the analytical laboratories and sampling equipment suppliers to ensure that appropriate procedures and processes are developed and implemented prior to and during the field work, to ensure that sample handling, and transport to and processing by the analytical laboratories is appropriate; and
- Conducting sampling according to set SOPs for the type of sampling being conducted (e.g. surface water sampling).

5.2 Soil Investigation Methodology

The soil sampling methodology that was employed during the investigation is summarised in **Table 6** below.

Table 6 Soil sampling methodology

Activity/item	Description
Service location	The soil investigation locations were cleared of services prior to commencement of intrusive works by a licensed service locator and the Dial-before-you-dig (DBYD) drawings were reviewed. Additionally, ground penetrating radar (GPR) was deployed around the perimeter of both buildings at the Site in an attempt to identify USTs or additional, unknown infrastructure.
Drilling method	Hand auguring was undertaken to a maximum 1.5 m below ground level (bgl) or at refusal. Push tube was used at BH01 and BH04 to a maximum depth of 2.7 m bgl (BH04).

Activity/item	Description
Soil logging	Soil logging was undertaken in general accordance with the Unified Soil Classification System, including the following information (e.g. soil/rock type, colour, grain size, inclusions, moisture conditions, staining and odour etc.). Borelogs are presented in Appendix C .
Soil screening	Soil sub-samples were placed in snap-lock plastic bags and the vapour headspace screened in the field for volatile organic compounds (VOC) using a photo-ionisation detector (PID) equipped with a 10.6 eV lamp.
Soil sampling	Samples were collected at sub-surface (~0.2 m, beneath asphalt) and where natural materials were encountered (~0.5 m). Two samples per borehole were submitted for laboratory analysis of CoPCs.
Sample preservation	All soil samples for chemical analysis were placed directly in laboratory supplied glass jars with Teflon-lined lids. All jars were filled to minimise the amount of headspace. Samples were not mixed or homogenised during collection, to minimise the loss of volatiles. Samples requiring asbestos analysis for waste classification purposes were placed into laboratory supplied plastic zip-lock bags.
Quality control	The following samples were submitted for analysis for quality control purposes: • intra-laboratory duplicate sample (1 in 20 primary samples) • inter-laboratory sample (1 in 20 primary samples) • rinsate blank (1 per day) • trip blank/spike (TRH and BTEXN only, 1 each per batch)
Decontamination procedures	Reusable equipment (e.g., sampling trowels) was decontaminated prior to being used with Liquinox™ and de-ionised water. Soil samples were collected using single use, disposable nitrile gloves.
Disposal of soil cuttings	All waste generated as part of the intrusive works was backfilled into borehole locations. Where overburden remained after backfilling, waste was placed into an on-site drum and classified as per the NSW EPA Waste Classification Guidelines (2014) to be disposed off-site.

5.3 Laboratory Analysis

The laboratories used in this investigation, which are NATA accredited for the specific analytical procedures were:

- Primary Laboratory: ALS Environmental, Smithfield, New South Wales
- Secondary Laboratory: Eurofins, Girraween, New South Wales

6.0 Assessment Criteria

6.1 Soil Assessment Criteria

Table 7 below presents the soil assessment criteria adopted for this investigation. As the Site is a commercial property, the commercial/industrial land use was selected for each respective criteria.

Table 7 Selected soil assessment criteria

Assessment criteria	Rationale
Health Investigation Levels (HILs), ASC NEPM (NEPC, 2013)	The ASC NEPM health investigation levels (HILs) provide a framework for the use of investigation and screening levels. The framework is applicable for assessing human health risk via all relevant pathways of exposure and covers a broad range of metals and organic substances. <u>Adopted:</u> HIL D (commercial/industrial)
Health Screening Levels (HSLs), ASC NEPM (NEPC, 2013)	The ASC NEPM presents health screening levels (HSLs) for petroleum compounds which have been derived through consideration of risks to human health, with the main focus being on the vapour exposure pathway. Full detail on their derivation and their application is provided in Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) <i>Technical Report No.10 - Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater</i>. (Friebel, & Nadebaum 2011). <u>Adopted:</u> HSL D Note: Sandy clays and clays were encountered on the Site during the drilling works, and as a conservative approach, Sand was selected for the criteria.
Intrusive Maintenance Worker (Shallow Trench) Health Screening Levels, Friebel, & Nadebaum 2011b	Friebel, & Nadebaum (2011) presents the HSLs for vapour intrusion of petroleum compounds relevant to intrusive maintenance workers (shallow trench). Health screening levels for intrusive maintenance workers is adopted for potential future intrusive work into shallow fill sandy clay and natural clays on-site. <u>Adopted:</u> Soil HSLs – Intrusive Maintenance Workers Note: Sandy clays and clays were encountered on the Site during the drilling works, and as a conservative approach, Sand was selected for the criteria.
Environmental Investigation Levels (EILs), ASC NEPM (NEPC, 2013)	The ASC NEPM environmental investigation levels (EILs) provide a framework for the development and use of site-specific investigation and screening levels based of Site soil chemistry and background concentrations. The framework is applicable for assessing terrestrial ecological risk via all relevant pathways of exposure and covers a broad range of metals and organic substances. <u>Adopted:</u> EILs for commercial/industrial land use

Assessment criteria	Rationale
Environmental Screening Levels (ESLs), ASC NEPM (NEPC, 2013)	The ASC NEPM presents ecological screening levels (ESLs) for petroleum compounds which have been derived through consideration of risks to the environment, with the main focus being on the vapour exposure pathway. <u>Adopted:</u> ESLs for commercial/industrial land use Note: Sandy clays and clays were encountered on the Site during the drilling works, and as a conservative approach, Sand was selected for the criteria.
Management Limits, ASC NEPM (NEPC, 2013)	The ASC NEPM presents Management Limits for petroleum compounds to address other adverse effects of TPH other than human and ecological health concerns, i.e., formation of free phase petroleum compounds and risk of explosive atmospheres. <u>Adopted:</u> Management Limits for commercial/industrial land use.

6.2 Waste Classification

To provide an indicative classification for disposal options should material be required to be disposed off-site, CoPC have been compared to the criteria outlined in Table 2 of the NSW EPA (2014) *Waste Classification Guidelines*, Part 1: Classifying Waste. The guidelines provide criteria for assessing the appropriate waste classification for material requiring off-site disposal and subsequently assessing the required disposal location for solid and liquid wastes. The classification process for non-liquid wastes focus on the potential for the waste to release chemical contaminants into the environment through contact with liquids (leachates).

CoPC were compared against the Specific Contaminant Concentration (SCC) test, which determines the total concentration of each contaminant in the waste sample. The guidelines set different contaminant thresholds (CT) for the total concentration of each contaminant in order for waste to be classified as either general solid waste, restricted solid waste or hazardous waste.

7.0 Quality Assurance and Quality Control

7.1 Quality Assurance / Quality Control Methodology

A quality assurance/quality control (QA/QC) program has been developed to ensure that data collected is sufficiently accurate, precise and reproducible to be used for the purposes of the validation works. Where required, all stages of works (data gathering, sample handling, laboratory analysis etc.) have been conducted in accordance with the QA/QC program outlined in the following sections.

The objective of the QA/QC program is to provide an assessment of the reliability of the data presented for interpretation for the project in terms of DQO's required for the project.

The DQIs have been established to set acceptance limits on field and laboratory data collected as part of the remediation programme and are summarised in **Section 5.1.5**.

Analytical data that fail to meet the pre-determined data quality objectives and acceptable limits of accuracy and precision would be managed using the following corrective actions on a case-by-case basis:

- reanalyse suspect samples, provided sample or extract is within holding time
- evaluate and amend sampling and / or analytical procedures
- resampling and reanalysis
- accept the data as an estimate with an acknowledged level of bias and imprecision, and
- discard the data.

If data of questionable reliability are used, restrictions and limitations associated with the use of such data would be clearly identified. Failure to meet the DQOs would be reported and the significance to the outcome of the program would be assessed.

7.2 Outcome of Data Validation

Analytical results for intra- and inter-laboratory soil samples and associated relative percentage difference (RPDs) calculations are presented in **Table E-1, Appendix E**. Results of the rinsate blank sample collected during field sampling are presented in **Table E-2, Appendix E**. Trip blank and Trip spike results are presented in **Tables E3 and E4 in Appendix E** respectively. The data validation procedure employed in the assessment of the field and laboratory QA/QC data indicated that no QA/QC issues were identified in the field or laboratory datasets that could have a material implication to decision-making on the project.

8.0 Results

8.1 Chronology of Fieldworks

Field activities were conducted on 22 August, 2022, and as outlined in **Section 1.4**, consisted of soil investigations at the Site. A summary of the fieldworks is outlined in **Table 8** below.

Table 8 Summary of fieldwork activities

Date	Task	Works Completed
22 August 2022	Service/utility clearance UST investigation	- Underground service clearance of proposed borehole locations (six in total). - GPR investigation around building structures to identify potential USTs at the Site
	Soil investigation	- Non-destructive drilling (NDD) to a minimum depth of 1.5 m bgl, or until refusal, at six borehole locations. - Sample collection of fill and natural materials at all locations.

8.2 GPR investigation

Due to the unknown existence of USTs at the Site, service and utility locators were engaged to undertake a GPR investigation around suspected and potential locations of USTs at the Site.

HLA (2000) made reference to a WorkCover search undertaken at the Site, which involved investigating the carpark and grassed area within the south-east portion of the Site. It was believed that USTs were present in this area, however, results of the search yielded no evidence of USTs.

Potential historic UST locations were scanned via GPR for indications of USTs and infrastructure such as pipes or vents. The areas screened via GPR were:

- Carpark area in the south-east of the Site, near Lane Cove Road
- Along the perimeters of both building footprints

In addition to GPR screening for USTs, during the investigation AECOM conducted a walkover in an attempt to identify apparent external signs of USTs, including fill points, pit covers, pipes or vents. The GPR investigation did not identify any unknown USTs in the scanned areas, and no external signs of USTs were observed at the Site.

The areas subjected to GPR screening at the Site are displayed in **Figure F2, Appendix A**.

8.3 Soil Results

8.3.1 Field Observations

During logging and sampling of borehole locations, soil samples were screened for VOCs using a PID and the readings were recorded on the borelogs (**Appendix C**). PID readings of all soil samples collected at the Site were 0.0 parts per million (ppm). There was no evidence of contamination (odour or visual) or suspected asbestos containing material observed in the soil samples collected from across the Site.

The general subsurface soil profile encountered during this investigation is summarised in **Table 9**.

Table 9 Generalised Lithology

Depth (m bgl)	Lithology	Approx. Material thickness (m)
0.0-0.2	Asphalt.	0.2
0.2-0.5	FILL (CLAY): dark grey, sub angular gravel or pebble inclusions.	0.3
0.5-2.7*	CLAY: orange-brown with white to grey mottling, low to medium plasticity.	2.2+

Note: *maximum depth of investigation

Soil materials encountered at all borehole locations consisted of a minimal band of fill materials (approximately 0.3 m thickness) followed by natural soil materials (clays) to extent of borehole investigations.

Natural materials encountered from approximately 0.5 m bgl across the Site consisted of residual, weathered clays. Fill and natural materials were consistent across the Site at all locations investigated and no signs of anthropogenic materials (e.g. construction and demolition waste [bricks, tiles, pipes etc]) were encountered in fill or natural materials encountered at the Site. No groundwater was encountered to the maximum depth reached, 2.7 m bgl.

8.3.2 Analytical Results

Analytical results for soil samples collected during the investigation are provided in **Table T1**, **Appendix B**. Laboratory certificates and documentation is provided in **Appendix F**, and summarised as follows:

- All soil samples reported an absence of asbestos.
- TRH, BTEXN, Phenols, PAHs, VOCs and OC/OP were all less than the LOR.
- Heavy metals were detected greater than the LOR, but less than the adopted investigation levels.

8.4 Waste Classification Results

Soil analytical results were assessed against the NSW EPA Waste Classification Guidelines (2014) and presented in **Table T2** in **Appendix B**. Laboratory certificates and documentation is provided in **Appendix F**. Soil cuttings generated from borehole locations were collected into a 200 L drum and stored on the Site, awaiting waste classification for off-site disposal.

Soil samples analysed reported concentrations less than the general solid waste CT1 threshold, with the exception of:

- Nickel in samples BH02_0.2, BH03_0.2, BH04_0.2, BH05_0.2 and BH06_0.1

Based on the CT1 threshold exceedances listed above, TCLP analysis for Nickel was undertaken on the selected samples to assess whether analytes within the soil are leachable. TCLP results are included in **Table T2** in **Appendix B**.

Review of the analytical results for total concentrations with the TCLP results indicate the results were less than the SCC1 and TCLP1 values, and no asbestos was identified, therefore the material is considered to meet the classification of General Solid Waste.

9.0 Updated Conceptual Site Model

The updated CSM is presented in **Table 10** and based on available soil analytical data.

Table 10 Conceptual Site Model

Receptors	Current Complete Linkages	Potentially Complete Linkages
On-site ecological: None	No - The Site consists of sealed hardstand material. - Only small areas of grassed areas and garden beds are located on the Site, running along the boundary.	No Same as for complete.
Off-site ecological: Tunks Hill picnic area (Lane Cove National Park), 400 m east Lane Cove River, 650 m east	No Soil CoPC were less than the adopted ecological ILs for commercial land use.	No Same as for complete.
On-site human health: Commercial/industrial workers	No Soil CoPC were less than the adopted human health ILs for commercial workers and land use.	No Same as for complete.
Off-site human health: Commercial/industrial workers in neighbouring facilities	No Soil CoPC were less than the adopted human health ILs for commercial workers and land use.	No Same as for complete.
Abbreviations and notes: VI = vapour intrusion; IMW = intrusive maintenance workers; WHS = workplace health and safety <i>AECOM considered that all future intrusive or construction works on the site would be undertaken in accordance with responsibilities under relevant Work Health and Safety legislation and relevant industry guidelines. Therefore, intrusive activities would be expected to be carried out under an appropriate site health and safety plan and, as such, the potential risk of exposure to contaminants present on this site would be addressed accordingly.</i>		

10.0 Discussion

10.1 GPR investigation

One of the key data gaps identified in the Phase 1 PSI was the potential for historic USTs to still be present on Site and the potential for impact due to their presence. The most likely locations were scanned via GPR for indications of USTs and infrastructure such as pipes or vents. The areas screened via GPR were:

- Carpark area in the south-east of the Site, near Lane Cove Road based on anecdotal information as to where the former USTs existed; and
- Along the perimeters of both building footprints which represents the most likely places USTs would be installed.

In addition to GPR screening for USTs, during the investigation AECOM conducted a walkover in an attempt to identify apparent external signs of USTs, including fill points, pit covers, pipes or vents. The GPR investigation did not identify any unknown USTs in the scanned areas, and no external signs of USTs were observed at the Site.

It is understood that a CEMP will be developed and incorporate a UFP, which will detail the management procedures in the unlikely event USTs, or material impacted by former USTs are encountered during excavations or future development works.

10.2 Soil

The data gap relating to potential for uncontrolled fill to be present that may be contaminated was addressed through the sampling of both the fill and natural material at a number of locations across the Site. Fill material was encountered to a maximum depth of 0.5 (BH01 and BH02) and typically consists of asphalt overlying reworked gravelly dark grey clay overlain on top of orange-brown clay (natural). There were no observations of contamination within the fill material during the drilling of boreholes and the PID values were all 0.0 ppm indicating a low likelihood of volatile organic compound contamination within the fill.

Location BH01 was selected due to its vicinity to where the former USTs were thought to be located to assess the nature and extent of contamination with soils surrounding the former tanks. The sample results returned values less than the LOR for analytes typically associated with fuel infrastructure indicating that future redevelopment works will not likely be impacted by potential contamination as a result of historical USTs.

Further, soil analytical results for both samples taken within fill material and natural material returned concentrations of CoPCs less than the LOR and/or the adopted assessment criteria for soil indicating no human health or ecological risk is present. Although the number of sample locations is relatively small for the size of the Site, given that there was no indication of contamination from the Phase I PSA and from the samples collected during this investigation it is considered unlikely that the material elsewhere would be impacted, unless vastly different to the material observed which was consistent across the entire Site as sample locations were selected to cover the eastern, western and middle of the Site.

10.2.1 Indicative Waste Classification

The analytical results from the samples collected from the Site indicated that the CoPC concentrations were generally less than the General Solid Waste (CT1) values, and where TCLP tests were undertaken, results were less than the respective GSW SCC1 and TCLP1 values. Therefore, an indicative classification for the material across the Site would be General Solid Waste.

11.0 Conclusions and Recommendation

11.1 Conclusions

The objective of this Targeted Phase II was to close the data gaps identified in the Phase 1 PSI (AECOM, 2024), provide a preliminary waste classification and to determine if a RAP may be required during or after the redevelopment.

The GPR survey in the area where the former tanks were noted to be as well as in vicinity of the existing buildings did not indicate the presence of the USTs and the results from the sample location in this vicinity were all less than the LOR and or adopted assessment criteria indicating that the material in vicinity of the former USTs is unlikely to be impacted. Based on the targeted sampling there isn't much fill and concentrations are less than the assessment criteria.

As summarised in the updated conceptual site model, the contamination risk to subsurface workers is considered to be low, as there is no complete SPR linkage due to the soil CoPC being less than the adopted assessment criteria for human health and ecological receptors.

Given that impacts have not been identified as a result of the completed scope of works, a RAP is not required for future redevelopment of that Stage 1 Site. Based on the available data, the results from the investigation indicate that the subsurface material would have an indicative classification of General Solid Waste, if off-site disposal is required.

This report concludes that the proposed data centre is suitable and warrants approval subject to the implementation of the mitigation measures described in Section 11.2 below.

11.2 Recommendations

The following is recommended:

- The proposed development is conducted under a CEMP incorporating a UFP. The CEMP should identify environmental controls required including but not limited to noise, erosion, dust, waste, unexpected finds including potentially contaminated fill which may contain asbestos or heavy metals. This document will provide the information and management required should unexpected contamination be encountered.
- Development of a Fill Importation Protocol (FIP) if significant importation of material is required. The FIP would provide procedures to follow so that potentially contaminated material isn't imported and placed at the Site during construction activities.

Following the implementation of the above mitigation measures, the remaining impacts are appropriate.

12.0 References

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Appendix A

Figures



AECOM



FIGURE F1:
SITE LOCALITY

PROJECT: STAGE 1 TARGETED
PHASE II INVESTIGATION -
TALAVERA BUSINESS PARK

SITE: 4 TALAVERA ROAD AND
6 - 10 TALVERA ROAD
MACQUAIE PARK,
NSW 2113

CLIENT: GOODMAN PROPERTY
SERVICES (AUST) PTY LTD

Legend

-  Site Boundary
-  Park
-  Watercourse

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FIGURE F2:
SITE LAYOUT AND
SAMPLE LOCATIONS

PROJECT: STAGE 1 TARGETED
PHASE II INVESTIGATION -
TALAVERA BUSINESS PARK

SITE: 4 TALAVERA ROAD AND
6 - 10 TALVERA ROAD
MACQUAIE PARK,
NSW 2113

CLIENT: GOODMAN PROPERTY
SERVICES (AUST) PTY LTD

Legend

- Site Boundary
- GPR Scanning Zone in
Areas USTs Most Likely to be
Present
- GPR Scanning Zone in
Vicinity of Former UST
Locations
- Borehole

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Appendix B

Analytical Tables

Soil Analytical Table																																				
Metals									Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons						Monocyclic Aromatic Hydrocarbons																
	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 fraction	C10-C14 fraction	C15-C28 fraction	C29-C36 fraction	C10-C36 fraction (sum)	C6-C10 fraction	C6-C10 fraction (minus BTEX)(F1)	>C10-C16 (minus Naphthalene)(F2)	>C10-C16 fraction	>C16-C34 fraction	>C34-C40 fraction	>C10-C40 fraction (sum)	Benzene	Toluene	Ethylbenzene	m&p-Xylene	o-Xylene	Total Xylenes	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Total MAH					
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
LOR	5	1	2	5	5	0.1	2	5	10	50	100	100	50	10	10	50	50	100	100	50	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	3000	900		240000	1500	730	6000	400000																												
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	160																																			
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil														700			1000	3500	10000																	
CRC Care 2011 Table B3 Soil HSL Int. Main. Worker (Shallow Trench), Sand 0-2m															NL	NL						77	NL	NL			NL									
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand 0-1m															260	NL						3	NL	NL			230									
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil 0-2m															215	170	170	1700	3300		75	135	165			180										
Field ID	Location Code	Sample Depth Range	Sampled Date Time	Matrix Type	Monitoring Round	<5	<1	13	<5	<5	<0.1	11	9	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH01 0.2 220822	BH01	0.2	22/08/2022	Soil	202208	<5	<1	7	7	32	<0.1	<2	<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH01 0.5 220822	BH01	0.5	22/08/2022	Soil	202208	<5	<1	7	7	32	<0.1	<2	<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH02 0.2 220822	BH02	0.2	22/08/2022	Soil	202208	<5	<1	102	28	<5	<0.1	116	48	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH02 0.5 220822	BH02	0.5	22/08/2022	Soil	202208	6	<1	15	7	13	<0.1	3	8	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH03 0.2 220822	BH03	0.2	22/08/2022	Soil	202208	<5	<1	87	28	<5	<0.1	97	49	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
QC100 220822	BH03	0.2	22/08/2022	Soil	202208	<5	<1	109	32	<5	<0.1	120	56	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH03 0.5 220822	BH03	0.5	22/08/2022	Soil	202208	7	<1	29	10	18	<0.1	16	10	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH04 0.2 220822	BH04	0.2	22/08/2022	Soil	202208	<5	<1	11	74	<5	<0.1	146	42	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH04 0.5 220822	BH04	0.5	22/08/2022	Soil	202208	9	<1	19	9	23	<0.1	<2	<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
QC200 220822	BH04	0.5	22/08/2022	SOIL	202208	15	<0.4	30	11	30	<0.1	<5	5.1	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5
BH05 0.2 220822	BH05	0.2	22/08/2022	Soil	202208	<5	<1	11	70	<5	<0.1	88	39	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH05 0.3 220822	BH05	0.3	22/08/2022	Soil	202208	9	<1	6	13	16	<0.1	6	<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH05 0.5 220822	BH05	0.5	22/08/2022	Soil	202208	10	<1	15	8	21	<0.1	<2	<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-
BH06 0.1 220822	BH06	0.1	22/08/2022	Soil	202208	<5	<1	14	46	<5	<0.1	120	37	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-

	Soil Analytical Table																																		
			Naphthalene		Polynuclear Aromatic Hydrocarbons																														
	Total BTEX	Naphthalene (VOC)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ calc(PQL)	Naphthalene	Acenaphthylene	Acenaphthene	Anthracene	Fluorene	Phenanthrene	Fluoranthene	Benz(a)anthracene	Benzo(k)fluoranthene	Benzo(b&j)fluoranthene	Benzo(a)pyrene	Chrysene	Pyrene	Benzo(g,h,i)perylene	Dibenz(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Sum of PAHs	3/4-Methylphenol (m/p-cresol)	Phenol	2-Chlorophenol	2-Methylphenol (o-Cresol)	3&4-Methylphenol (m&p-Cresol)	Total Cresols	2-Nitrophenol	2,4-Dichlorophenol					
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
LOR	0.2	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4000	1	0.5	0.5	0.5	0.4	0.5	0.5	0.5				
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil			40	40	40																				240000					25000					
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind						370																													
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																			
CRC Care 2011 Table B3 Soil HSL Int. Main. Worker (Shallow Trench), Sand																																			
0-2m		NL																																	
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																																			
0-1m						NL																													
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																																			
0-2m																1.4																			

Field ID	Location Code	Sample Depth Range	Sampled Date Time	Matrix Type	Monitoring Round																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Soil Analytical Table																																		
Phenolic Compounds														Fumigants						Halogenated Aromatic Compounds														
2,4-Dimethylphenol	2,6-Dichlorophenol	4-Chloro-3-methylphenol	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	4,6-Dinitro-2-methylphenol	Pentachlorophenol	2,4-Dinitrophenol	2-Cyclohexyl-4,6-dinitrophenol	4-Nitrophenol	Dinoseb	Tetrachlorophenols	Sum of Phenols (halogenated)	Sum of Phenols (non-halogenated)	1,2-Dibromoethane (EDB)	1,2-Dichloropropane	2,2-Dichloropropane	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Bromobenzene	Chlorobenzene	2-Chlorotoluene	4-Chlorotoluene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Bromochloromethane	Allyl chloride	Dichlorodifluoromethane (Freon 12)				
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
LOR	0.5	0.5	0.5	0.5	0.5	5	2	5	20	5	20	10	1	20	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5		
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil							660																											
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																																		
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																		
CRC Care 2011 Table B3 Soil HSL Int. Main. Worker (Shallow Trench), Sand																																		
0-2m																																		
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																																		
0-1m																																		
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																																		
0-2m																																		

Field ID	Location Code	Sample Depth Range	Sampled Date Time	Matrix Type	Monitoring Round	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH01 0.2 220822	BH01	0.2	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH01 0.5 220822	BH01	0.5	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH02 0.2 220822	BH02	0.2	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH02 0.5 220822	BH02	0.5	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH03 0.2 220822	BH03	0.2	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
QC100 220822	BH03	0.2	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH03 0.5 220822	BH03	0.5	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH04 0.2 220822	BH04	0.2	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH04 0.5 220822	BH04	0.5	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
QC200 220822	BH04	0.5	22/08/2022	SOIL	202208	<0.5	<0.5	<1	<1	<1	<5	<1	<5	<20	<5	<20	<10	<1	<20	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5
BH05 0.2 220822	BH05	0.2	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH05 0.3 220822	BH05	0.3	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH05 0.5 220822	BH05	0.5	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	
BH06 0.1 220822	BH06	0.1	22/08/2022	Soil	202208	<0.5	<0.5	<0.5	<0.5	<0.5	-	<2	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<5	

[illegible]

Soil Analytical Table																																		
s	Chemical Parameters				Hydrocarbon Compounds			Sulfonated Compounds			Inorganic Hydrocarbons		Organophosphorus																					
	Dibromochloromethane	Moisture Content (dried @ 103°C)	Moisture Content	weight of sample	2-Propanone (Acetone)	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Carbon disulfide	Chlorinated hydrocarbons (sum)	Other chlorinated hydrocarbons (sum)	Bolstar (Sulprofos)	Mevinphos (Phosdrin)	Omethoate	Pirimiphos-methyl	Pyrazophos	Azinphos Methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Disulfoton					
	mg/kg	%	%	g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
LOR	0.5	1	1	0.01	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	2	0.2	0.2	0.05	0.05	0.05	0.05	0.05	0.05	2	0.2	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.2			
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																				2000														
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind																																		
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																																		
CRC Care 2011 Table B3 Soil HSL Int. Main. Worker (Shallow Trench), Sand																																		
0-2m																																		
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																																		
0-1m																																		
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																																		
0-2m																																		

Field ID	Location Code	Sample Depth Range	Sampled Date Time	Matrix Type	Monitoring Round	<0.5	-	9.7	44.5	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH01 0.2 220822	BH01	0.2	22/08/2022	Soil	202208	<0.5	-	13.4	50.1	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH01 0.5 220822	BH01	0.5	22/08/2022	Soil	202208	<0.5	-	10.1	69.9	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH02 0.2 220822	BH02	0.2	22/08/2022	Soil	202208	<0.5	-	10.1	69.9	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH02 0.5 220822	BH02	0.5	22/08/2022	Soil	202208	<0.5	-	10	43	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH03 0.2 220822	BH03	0.2	22/08/2022	Soil	202208	<0.5	-	6.4	53.9	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
QC100 220822	BH03	0.2	22/08/2022	Soil	202208	<0.5	-	5	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH03 0.5 220822	BH03	0.5	22/08/2022	Soil	202208	<0.5	-	15.6	41.4	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH04 0.2 220822	BH04	0.2	22/08/2022	Soil	202208	<0.5	-	6.8	69.3	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH04 0.5 220822	BH04	0.5	22/08/2022	Soil	202208	<0.5	-	19.7	49.6	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
QC200 220822	BH04	0.5	22/08/2022	SOIL	202208	<0.5	16	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05 0.2 220822	BH05	0.2	22/08/2022	Soil	202208	<0.5	-	17.7	44.3	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH05 0.3 220822	BH05	0.3	22/08/2022	Soil	202208	<0.5	-	23.4	49.9	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH05 0.5 220822	BH05	0.5	22/08/2022	Soil	202208	<0.5	-	15.9	37.5	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-
BH06 0.1 220822	BH06	0.1	22/08/2022	Soil	202208	<0.5	-	15.5	55.6	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-

[illegible]

	Soil Analytical Table																		Asbestos					
	Organochlorine Pesticides (OC)																		APPROVED IDENTIFIER:	Asbestos fibres	Asbestos Type	Organic Fibre	Asbestos (Trace)	Synthetic Mineral Fibre
	DDD	DDE	DDT	DDT+DDE+DDD	Endosulfan	Endosulfan 1	Endosulfan 2	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor epoxide	Hexachlorobenzene (HCB)	Methoxychlor	Toxaphene	Organochlorine pesticides (sum)	Other organochlorine pesticides (sum)						
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	g/kg	Fibres	g/kg
LOR	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.5	0.1	0.1	-	0.1	-	0.1	5	0.1
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil				3600	2000				100			50		80	2500	160								
NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind			640																					
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Coarse Soil																								
CRC Care 2011 Table B3 Soil HSL Int. Main. Worker (Shallow Trench), Sand																								
0-2m																								
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Sand																								
0-1m																								
NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Coarse Soil																								
0-2m																								

Field ID	Location Code	Sample Depth Range	Sampled Date Time	Matrix Type	Monitoring Round																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Soil Analytical Table

	Metals									Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons						
	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Nickel (filtered)	Zinc	C6-C9 fraction	C10-C14 fraction	C15-C28 fraction	C29-C36 fraction	C10-C36 fraction (sum)	C6-C10 fraction	C6-C10 fraction (minus BTEX)(F1)	>C10-C16 (minus Naphthalene)(F2)	>C10-C16 fraction	>C16-C34 fraction	>C34-C40 fraction	>C10-C40 fraction (sum)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	5	1	2	5	5	0.1	2	0.001	5	10	50	100	100	50	10	10	50	50	100	100	50
NSW 2014 General Solid Waste CT1 (No Leaching)	100	20			100	4				650				10,000							
NSW 2014 General Solid Waste SCC1 (with leached)	500	100			1,500	50	1,050			650				10,000							
NSW 2014 General Solid Waste TCLP1 (leached)								2													
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	400	80			400	16				2,600				40,000							
NSW 2014 Restricted Solid Waste SCC2 (with leached)	2,000	400			6,000	200	4,200			2,600				40,000							
NSW 2014 Restricted Solid Waste TCLP2 (leached)								8													

Field ID	Date																					
BH01_0.2_220822	22/08/2022	<5	<1	13	<5	<5	<0.1	11		9	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
BH01_0.5_220822	22/08/2022	<5	<1	7	7	32	<0.1	<2		<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
BH02_0.2_220822	22/08/2022	<5	<1	102	28	<5	<0.1	116		48	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
									0.1													
BH02_0.5_220822	22/08/2022	6	<1	15	7	13	<0.1	3		8	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
BH03_0.2_220822	22/08/2022	<5	<1	87	28	<5	<0.1	97		49	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
									0.2													
BH03_0.5_220822	22/08/2022	7	<1	29	10	18	<0.1	16		10	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
BH04_0.2_220822	22/08/2022	<5	<1	11	74	<5	<0.1	146		42	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
									0.6													
BH04_0.5_220822	22/08/2022	9	<1	19	9	23	<0.1	<2		<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
BH05_0.2_220822	22/08/2022	<5	<1	11	70	<5	<0.1	88		39	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
									0.2													
BH05_0.3_220822	22/08/2022	9	<1	6	13	16	<0.1	6		<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
BH05_0.5_220822	22/08/2022	10	<1	15	8	21	<0.1	<2		<5	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
BH06_0.1_220822	22/08/2022	<5	<1	14	46	<5	<0.1	120		37	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50
									0.7													
QC100_220822	22/08/2022	<5	<1	109	32	<5	<0.1	120		56	<10	<50	<100	<100	<50	<10	<10	<50	<50	<100	<100	<50

Environmental Standards

- NSW EPA, November 2014, NSW 2014 General Solid Waste CT1 (No Leaching)
- NSW EPA, November 2014, NSW 2014 General Solid Waste SCC1 (with leached)
- NSW EPA, November 2014, NSW 2014 General Solid Waste TCLP1 (leached)
- NSW EPA, November 2014, NSW 2014 Restricted Solid Waste CT2 (No Leaching)
- NSW EPA, November 2014, NSW 2014 Restricted Solid Waste SCC2 (with leached)
- NSW EPA, November 2014, NSW 2014 Restricted Solid Waste TCLP2 (leached)

Soil Analytical Table

	Monocyclic Aromatic Hydrocarbons							Naphthalene	Polynuclear Aromatic Hydrocarbons												
	Benzene	Toluene	Ethylbenzene	m&p-Xylene	o-Xylene	Total Xylenes	Total BTEX	Naphthalene (VOC)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ calc (PQL)	Naphthalene	Acenaphthylene	Acenaphthene	Anthracene	Fluorene	Phenanthrene	Fluoranthene	Benzo(a)anthracene	Benzo(k)fluoranthene	Benzo(b&j)fluoranthene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.5	0.5	0.5	0.5	0.5	0.2	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW 2014 General Solid Waste CT1 (No Leaching)	10	288	600			1,000															
NSW 2014 General Solid Waste SCC1 (with leached)	18	518	1,080			1,800															
NSW 2014 General Solid Waste TCLP1 (leached)																					
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	40	1,152	2,400			4,000															
NSW 2014 Restricted Solid Waste SCC2 (with leached)	72	2,073	4,320			7,200															
NSW 2014 Restricted Solid Waste TCLP2 (leached)																					

Field ID	Date																				
BH01_0.2_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_0.5_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH02_0.2_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH02_0.5_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH03_0.2_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH03_0.5_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH04_0.2_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH04_0.5_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05_0.2_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05_0.3_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH05_0.5_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH06_0.1_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
QC100_220822	22/08/2022	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Environmental Standards

NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid



Soil Analytical Table

									Phenolic Compounds												
	Benzo(a)pyrene	Chrysene	Pyrene	Benzo(g,h,i)perylene	Dibenz(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Sum of PAHs	3/4-Methylphenol (m/p-cresol)	Phenol	2-Chlorophenol	2-Methylphenol (o-Cresol)	2-Nitrophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	4-Chloro-3-methylphenol	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	Pentachlorophenol	1,2-Dibromoethane (EDB)	1,2-Dichloropropane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2	0.5	0.5
NSW 2014 General Solid Waste CT1 (No Leaching)	0.8						200				4,000						40	8,000			
NSW 2014 General Solid Waste SCC1 (with leached)	10						200		518		7,200						72	14,400			
NSW 2014 General Solid Waste TCLP1 (leached)																					
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	3.2						800				16,000						160	32,000			
NSW 2014 Restricted Solid Waste SCC2 (with leached)	23						800		2,073		28,800						288	57,600			
NSW 2014 Restricted Solid Waste TCLP2 (leached)																					

Field ID	Date																				
BH01_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH01_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH02_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH02_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH03_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH03_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH04_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH04_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH05_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH05_0.3_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH05_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
BH06_0.1_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5
QC100_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5

Environmental Standards

NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid



Soil Analytical Table

	Fumigants			Halogenated Aromatic Compounds																	
	2,2-Dichloropropane	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Bromobenzene	Chlorobenzene	2-Chlorotoluene	4-Chlorotoluene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Dichlorodifluoromethane (Freon 12)	Chloromethane	Vinyl chloride	Bromomethane	Chloroethane	Trichlorofluoromethane (Freon 11)	1,1-Dichloroethene	Iodomethane	1,1-Dichloroethane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	5	5	5	5	5	0.5	0.5	0.5
NSW 2014 General Solid Waste CT1 (No Leaching)					2,000			86		150					4				14		
NSW 2014 General Solid Waste SCC1 (with leached)					3,600			155		270					7.2				25		
NSW 2014 General Solid Waste TCLP1 (leached)																					
NSW 2014 Restricted Solid Waste CT2 (No Leaching)					8,000			344		600					16				56		
NSW 2014 Restricted Solid Waste SCC2 (with leached)					14,400			620		1,080					28.8				100		
NSW 2014 Restricted Solid Waste TCLP2 (leached)																					

Field ID	Date																					
BH01_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH01_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH02_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH02_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH03_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH03_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH04_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH04_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH05_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH05_0.3_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH05_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
BH06_0.1_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
QC100_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5

Environmental Standards

NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid

Soil Analytical Table

	Halogenated Aliphatic Compounds																				Trihalor
	Cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride	1,2-Dichloroethane	Trichloroethene	Dibromomethane	1,1,2-Trichloroethane	1,3-Dichloropropane	Tetrachloroethene	1,1,1,2-Tetrachloroethane	trans-1,4-Dichloro-2-butene	Cis-1,4-Dichloro-2-butene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Pentachloroethane	1,2-Dibromo-3-chloropropane	Hexachlorobutadiene	Bromodichloromethane	Bromoform
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW 2014 General Solid Waste CT1 (No Leaching)			600		10	10	10		24		14	200			26						
NSW 2014 General Solid Waste SCC1 (with leached)			1,080		18	18	18		43.2		25.2	360			46.8						
NSW 2014 General Solid Waste TCLP1 (leached)																					
NSW 2014 Restricted Solid Waste CT2 (No Leaching)			2,400		40	40	40		96		56	800			104						
NSW 2014 Restricted Solid Waste SCC2 (with leached)			4,320		72	72	72		172.8		100.8	1,440			187.2						
NSW 2014 Restricted Solid Waste TCLP2 (leached)																					

Field ID	Date																						
BH01_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH01_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH02_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH02_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH03_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH03_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH04_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH04_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH05_0.2_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH05_0.3_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH05_0.5_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
BH06_0.1_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
QC100_220822	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

Environmental Standards

NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid

Soil Analytical Table

	ethanes		Physico-Chemical Parameters		Organophosphorus Pesticides (OP)																
	Chloroform	Dibromochloromethane	Moisture Content	weight of sample	Azinphos Methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenamiphos	Fenthion	Malathion	Monocrotophos	Parathion	Parathion-methyl
EQL	0.5	0.5	1	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.2
NSW 2014 General Solid Waste CT1 (No Leaching)	120								4												
NSW 2014 General Solid Waste SCC1 (with leached)	126								7.5												
NSW 2014 General Solid Waste TCLP1 (leached)																					
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	480								16												
NSW 2014 Restricted Solid Waste SCC2 (with leached)	864								30												
NSW 2014 Restricted Solid Waste TCLP2 (leached)																					

Field ID	Date																					
BH01_0.2_220822	22/08/2022	<0.5	<0.5	9.7	44.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH01_0.5_220822	22/08/2022	<0.5	<0.5	13.4	50.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH02_0.2_220822	22/08/2022	<0.5	<0.5	10.1	69.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH02_0.5_220822	22/08/2022	<0.5	<0.5	10.0	43.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH03_0.2_220822	22/08/2022	<0.5	<0.5	6.4	53.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH03_0.5_220822	22/08/2022	<0.5	<0.5	15.6	41.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH04_0.2_220822	22/08/2022	<0.5	<0.5	6.8	69.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH04_0.5_220822	22/08/2022	<0.5	<0.5	19.7	49.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH05_0.2_220822	22/08/2022	<0.5	<0.5	17.7	44.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH05_0.3_220822	22/08/2022	<0.5	<0.5	23.4	49.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH05_0.5_220822	22/08/2022	<0.5	<0.5	15.9	37.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
BH06_0.1_220822	22/08/2022	<0.5	<0.5	15.5	55.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	
QC100_220822	22/08/2022	<0.5	<0.5	5.0		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	

Environmental Standards

NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid



Soil Analytical Table

	Organochlorine Pesticides (OC)																				
	Primphos-ethyl	Prothiofos	Aldrin	Dieldrin	Aldrin + Dieldrin	α-BHC	β-BHC	γ-BHC	δ-BHC (Lindane)	cis-Chlordane	trans-Chlordane	Chlordane	DDD	DDE	DDT	DDT+DDE+DDD	Endosulfan	Endosulfan 1	Endosulfan 2	Endosulfan sulfate	Endrin
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05
NSW 2014 General Solid Waste CT1 (No Leaching)																	60				
NSW 2014 General Solid Waste SCC1 (with leached)																	108				
NSW 2014 General Solid Waste TCLP1 (leached)																					
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																	240				
NSW 2014 Restricted Solid Waste SCC2 (with leached)																	432				
NSW 2014 Restricted Solid Waste TCLP2 (leached)																					

Field ID	Date																				
BH01_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH01_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH02_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH02_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH03_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH03_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH04_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH04_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH05_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH05_0.3_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH05_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
BH06_0.1_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05
QC100_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05

Environmental Standards

NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid

Soil Analytical Table

								Asbestos				
	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor epoxide	Hexachlorobenzene (HCB)	Methoxychlor	APPROVED IDENTIFIER:	Asbestos fibres	Asbestos Type	Organic Fibre	Asbestos (Trace)	Synthetic Mineral Fibre
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-	g/kg	Fibres	g/kg
EQL	0.05	0.05	0.05	0.05	0.05	0.2		0.1		0.1	5	0.1
NSW 2014 General Solid Waste CT1 (No Leaching)												
NSW 2014 General Solid Waste SCC1 (with leached)												
NSW 2014 General Solid Waste TCLP1 (leached)												
NSW 2014 Restricted Solid Waste CT2 (No Leaching)												
NSW 2014 Restricted Solid Waste SCC2 (with leached)												
NSW 2014 Restricted Solid Waste TCLP2 (leached)												

Field ID	Date												
BH01_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH01_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH02_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH02_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH03_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH03_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH04_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH04_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH05_0.2_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH05_0.3_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH05_0.5_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
BH06_0.1_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	1	0	1	0	0	0
QC100_220822	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2						

Environmental Standards

NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 General Solid W
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid
NSW EPA, November 2014, NSW 2014 Restricted Solid

Appendix C

Borelogs

Client:	Goodman	Project No:	60687982	Start Date:	22/08/2022
Project:	Goodman_Talavera Road	Logged by:	MT	End Date:	22/08/2022
Location:		Checked by:	SR	Location Meth.:	Survey
Driller:	EPOCA	Easting:			
Drill Type:	push tube	Northing:			
Drill Model:		Hor. Proj/Dat:	MGA94/GDA94-55H		
Drill Fluid:	-	Total Depth:	1.1 m		
		Bore Dia.:	150 mm		

Drill Method	Support	Groundwater Data and Comments	Depth (m)	Graphic Log	Classification	LITHOLOGICAL DESCRIPTION	Moisture	Consistency/Relative Density	Sample Interval PID (ppm)	Sample ID
PT	None		0			FILL: ASPHALT	D	L	0.0	BH01_0.2
						FILL: Sand: Coarse grained, yellow, angular sandstone inclusions				
PT			1			Clay: Low plasticity, grey with red mottle			0.0	BH_0.5
						Rock present				
						BH01 terminated at 1.10 m. Refusal				

Client:	Goodman	Project No:	60687982	Start Date:	22/08/2022
Project:	Goodman_Talavera Road	Logged by:	MT	End Date:	22/08/2022
Location:		Checked by:	SR	Location Meth.:	Survey
Driller:	EPOCA	Easting:			
Drill Type:		Northing:			
Drill Model:		Hor. Proj/Dat:	MGA94/GDA94-55M		
Drill Fluid:	-	Total Depth:	1.45 m		
		Bore Dia.:	150 mm		

Drill Method	Support	Groundwater Data and Comments	Depth (m)	Graphic Log	Classification	LITHOLOGICAL DESCRIPTION	Moisture	Consistency/ Relative Density	Sample Interval PID (ppm)	Sample ID
None			0			FILL: ASPHALT	D	Loose		BH02_0.2
						FILL: Clay: Low plasticity, dark grey, with subangular gravel inclusions				
						Sandy Clay: Low to medium plasticity, light brown with orange mottle, with coarse grained sand	MD			BH02_0.5
						Clay: Medium plasticity, dark orange with red mottle				
			1			Grey mottle				
						BH02 terminated at 1.45 m. Target depth				

Client:	Goodman	Project No:	60687982	Start Date:	22/08/2022
Project:	Goodman_Talavera Road	Logged by:	MT	End Date:	22/08/2022
Location:		Checked by:	SR	Location Meth.:	Survey
Driller:	EPOCA	Easting:			
Drill Type:		Northing:			
Drill Model:		Total Depth:	1.4 m	Hor. Proj/Dat:	MGA94/GDA94-55M
Drill Fluid:	-	Bore Dia.:	150 mm		

Drill Method	Support	Groundwater Data and Comments	Depth (m)	Graphic Log	Classification	LITHOLOGICAL DESCRIPTION	Moisture	Consistency/Relative Density	Sample Interval PID (ppm)	Sample ID
None			0			FILL: ASPHALT	D	Loose		
						FILL Sandy Clay: Low to medium plasticity, dark grey, with pebble inclusions			0.0	BH03_0.2
						Clay: medium plasticity, light orange with grey mottle	MD		0.0	BH03_0.5
			1			Bright orange - grey mottle				
						BH03 terminated at 1.40 m. Refusal				

Client:	Goodman	Project No:	60687982	Start Date:	22/08/2022
Project:	Goodman_Talavera Road	Logged by:	MT	End Date:	22/08/2022
Location:		Checked by:	SR	Location Meth.:	Survey
Driller:	EPOCA	Easting:			
Drill Type:	hand auger, push tube	Northing:			
Drill Model:		Hor. Proj/Dat:	MGA94/GDA94-55M		
Drill Fluid:	-	Total Depth:	2.7 m		
		Bore Dia.:	150 mm		

Drill Method	Support	Groundwater Data and Comments	Depth (m)	Graphic Log	Classification	LITHOLOGICAL DESCRIPTION	Moisture	Consistency/ Relative Density	Sample Interval PID (ppm)	Sample ID
HA	None		0			FILL: ASPHALT	D	Loose		
						FILL: Clay: low plasticity, dark grey, with sandstone inclusions				BH04_0.2
						Clay: low plasticity, light orange with brown mottle	MD			BH04_0.5
PT			1			Dark brown				
			2			Light orange, weathered, brittle, grey and white mottle				
						BH04 terminated at 2.70 m. Target depth				

Client:	Goodman	Project No:	60687982	Start Date:	22/08/2022
Project:	Goodman_Talavera Road	Logged by:	MT	End Date:	22/08/2022
Location:		Checked by:	SR	Location Meth.:	Survey
Driller:	EPOCA	Easting:			
Drill Type:		Northing:			
Drill Model:		Hor. Proj/Dat:	MGA94/GDA94-55M		
Drill Fluid:	-	Total Depth:	0.9 m		
		Bore Dia.:	150 mm		

Drill Method	Support	Groundwater Data and Comments	Depth (m)	Graphic Log	Classification	LITHOLOGICAL DESCRIPTION	Moisture	Consistency/ Relative Density	Sample Interval	PID (ppm)	Sample ID
None	None		0			FILL: ASPHALT	D	Loose			BH05_0.2
						FILL: Clay: low plasticity, light grey, pebble inclusions					
						Sand: coarse grained, yellow, with cobble inclusions					
						Clay: low plasticity, orange with grey mottle					
			1			BH05 terminated at 0.90 m. Refusal					

Client:	Goodman	Project No:	60687982	Start Date:	22/08/2022
Project:	Goodman_Talavera Road	Logged by:	MT	End Date:	22/08/2022
Location:		Checked by:	SR	Location Meth.:	Survey
Driller:	EPOCA	Easting:			
Drill Type:	hand auger	Northing:			
Drill Model:		Hor. Proj/Dat:	MGA94/GDA94-55M		
Drill Fluid:	-	Total Depth:	0.9 m		
		Bore Dia.:	150 mm		

Drill Method	Support	Groundwater Data and Comments	Depth (m)	Graphic Log	Classification	LITHOLOGICAL DESCRIPTION	Moisture	Consistency/ Relative Density	Sample Interval	PID (ppm)	Sample ID
HA	None		0			FILL: ASPHALT	D	Loose			
						FILL: Clay: low plasticity, dark grey, with pebble inclusions					BH06_0.1
						Clay: low plasticity, light orange, with white mottle	MD				BH06_0.3
						Weathered rock					
			1			BH06 terminated at 0.90 m. Refusal					

Appendix D

Field Notes and Calibration Records

Certificate of Service and Calibration

Gas Detector
MiniRAE 3000

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	William Pak
Instrument	MiniRAE 3000 (PGM 7320)
Serial Number	592-930519
Client Name	Matthew Taylor (AECOM Australia Pty Ltd)
Project Number	60687982 / 1.3

Instrument Check			
Item	Test	Test Passed	Comments
Li-Ion Rechargeable Battery	Battery Charge and Drain	✓	Unit runs for > 8 hours on a full charge
Charger and Power Supply	Operation/Check	✓	No damage
Unit Display	Operation	✓	Screen visible, no damage
Keypad	Operation	✓	Responsive, no damage
Pump	Flow Check	✓	Flow rate > 0.5 L/min
Monitor Housing	Condition/Check	✓	No damage
Rubber Boot	Check	✓	Clean, no damage
Flexi Probe	Condition/Check	✓	No leaks, no damage
Water Trap Filter	Visual Check	✓	Clean
Alarms	Audible, Visual, Vibration Check	✓	All modes of alarms are functional
Data Logger	Operation	✓	Unit records data, default set at 60 seconds
Lamp and Sensor	Clean and Calibration	✓	Lamp and PID sensor cleaned and calibrated
PCB	Operation	✓	Unit is fully functional
Firmware	Version	✓	v2.20A

Instrument Readings					
Parameter	Calibration Gas	Concentration	Reference No.	Zero Reading	Span Reading
PID (11.7eV)	Isobutylene	100 ppm	WO233801-61	0 ppm	100.6 ppm

Declaration
WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The calibration data supplied was obtained in accordance with manufacturer's specifications using gases of known concentrations.

Calibrated By	William Pak
Calibration Date	17/08/2022
Calibration Due	17/02/2023

ANZ

FQM - Borehole Monitoring Bore Field Log

Q4AN(EV)-101-FM1

Project Name:		GOODMAN TALAUERA		Project Number:		60687982		Borehole No:		BH01	
Project Location:		MACQUARIE PARK		Client:		GOODMAN					
PM Name:		S RANDALL		Date Commenced:		22-8-22		Sheet		1 of 1	
Bore Location:				Date Completed:		22-8-22					
Drill Contractor:		EPOCA		Fieldwork Staff:		M TAYLOR					
Drill Model:		Hole Angle:		deg.		Bore Size:		RL:			
Drilling Fluid:		Orientation:		deg.		Co-ords:		Permit No.:			

Material Description				Field Data				Field Notes		Well Cons			
Method	Casing	Penetration	Depth	Graphic Log	USCS Classification	Type, colour/mottling, plasticity/particle size, secondary/minor components, soil origin	Moisture	Consistency/Rel Density	PID (ppm)	Sampling	Odour, staining, groundwater observations/regime, additional information	Depth	Anulus
CORE	HA		0.10			~~BITUMEN~~ ASPHALT							
			0.5			FILL: SAND, YELLOW, COARSE, ANGULAR, SANDSTONE COBBLE INC. SR	D	L	0.0	X	BH01-0.2		
			1.0			CLAY: GREY, RED MOTTLE, FINE, LOW PLAST.	D	L	0.0	X	BH01-0.5		
			1.1			REFUSAL @ 1.1m BEDROCK							
			1.5										
			2.0										

ANZ

FQM - Borehole\ Monitoring Bore Field Log

Q4AN(EV)-101-FM1

Project Name:		TALAUEKA		Project Number:		60687		Borehole No.:		BH02	
Project Location:		MACQUARIE PARK		Client:		GOODMAN					
PM Name:		S RANDALL		Date Commenced:		22.8.22		Sheet		1 of 1	
Bore Location:				Date Completed:		22.8.22					
Drill Contractor:		EPOCA		Fieldwork Staff:		M TAYLOR					
Drill Model:		Hole Angle:		deg.		Bore Size:		RL:			
Drilling Fluid:		Orientation:		deg.		Co-ords:		Permit No.:			

				Field Data				Field Notes		Well Cons		
Method	Casing	Penetration	Depth	USCS Classification	Material Description Type, colour/mottling, plasticity/particle size, secondary/minor components, soil origin	Moisture	Consistency/Rai Density	PID (ppm)	Sampling	Odour, staining, groundwater observations/ regime, additional information	Well Cons	
											Depth	Anulus
C	H		0.1		~~BEFORE~~ ASPHALT FILL: CLAY, GREY DARK GRAVEL INCL., >10mm SA	D	L	0.0	X	BH02 - 0.2		
			0.5		CLAY: LIGHT BR., ORANGE MOTTLE, COARSE SAND, SA	D	L	0.0	X	BH02 - 0.5		
			0.8		CLAY: DARK ORANGE, RED MOTTLE, M PLAST	D	M					
			1.0		↓ GREY MOTTLING							
			1.5		TO 1.45m REFUSAL					REFUSAL @ 1.45m		

ANZ

FQM - Borehole Monitoring Bore Field Log

Q4AN(EV)-101-FM1

Project Name:		TALAVERA		Project Number:		6068 7982		Borehole No.:		BH03	
Project Location:		MACQUARIE PARK		Client:		GOODMAN					
PM Name:		S RANDALL		Date Commenced:		22.8.22					
Bore Location:				Date Completed:		22.8.22		Sheet		1 of 1	
Drill Contractor:		EPOCA		Fieldwork Staff:		M TAYLOR					
Drill Model:		Hole Angle:		deg.		Bore Size:		RL:			
Drilling Fluid:		Orientation:		deg.		Co-ords:		Permit No.:			

Material Description				Field Data				Field Notes		Well Cons		
Method	Casing	Penetration	Depth	USCS Classification	Type, colour/mottling, plasticity/particle size, secondary/minor components, soil origin	Moisture	Consistency/Rel Density	PID (ppm)	Sampling	Odour, staining, groundwater observations/regime, additional information	Depth	Anulus
Ker			0.1		ASPHALT							
			0.4		FILL: SANDY CLAY, DARK GREY, PEBBLE INC. >10mm	0.6						
HA			0.5		CLAY: LIGHT ORANGE, GREY MOTTLE, M PLAST.	0.0						
			1.0		BRIGHT ORANGE GREY MOTTLING							
			1.4		REFUSAL @ 1.4m							
			1.5									

ANZ

FQM - Borehole Monitoring Bore Field Log

Q4AN(EV)-101-FM1

Project Name:		TALAVERA		Project Number:		60697982		Borehole No.:	
Project Location:		MACQUARIE PARK		Client:		GOODMAN		BH04	
PM Name:		S RANDALL		Date Commenced:		22.8.22			
Bore Location:		EPOCA		Date Completed:		22.8.22			
Drill Contractor:		EPOCA		Fieldwork Staff:		M TAYLOR		Sheet 1 of 1	
Drill Model:		Hole Angle:		deg.		Bore Size:		RL:	
Drilling Fluid:		Orientation:		deg.		Co-ords:		Permit No.:	

				Field Data				Field Notes		Well Cons			
Casing Method	Casing	Penetration	Depth	Graphic Log	USCS Classification	Material Description Type, colour/mottling, plasticity/particle size, secondary/minor components, soil origin	Moisture	Consistency/Rel Density	PID (ppm)	Sampling	Odour, staining, groundwater observations/ regime, additional information	Well Cons	
												Depth	Anulus
HA	C	PT	0.1			ASPHALT							
			0.4			FILL: CLAY - DARK GREY, COBBLE INCL. SA. SANDSTONE	DL	0.0			BH04-0.2		
			0.5			CLAY: LIGHT ORANGE BROWN MOTTLE, LOW PLAST	DM	0.0					
			1.0			DARK BR @ 0.8m							
			1.5			LIGHT ORANGE @ 1.3m							
			2.0			WEATHERED, BRITTLE GREY & WHITE MOTTLED	DH						
			2.7			TD @ 2.7m TERMINATED							

ANZ.

FQM - Borehole Monitoring Bore Field Log

Q4AN(EV)-101-FM1

Project Name:		TALAVERA		Project Number:		60687982		Borehole No.:		BH05	
Project Location:		MACQUARIE PARK		Client:		GOODMAN					
PM Name:		S RANDALL		Date Commenced:		22.8.22		Sheet		1 of 1	
Bore Location:		EPOCA		Date Completed:		22.8.22					
Drill Contractor:				Fieldwork Staff:		M TAYLOR					
Drill Model:		Hole Angle:		deg.		Bore Size:		RL:			
Drilling Fluid:		Orientation:		deg.		Co-ords:		Permit No.:			

Material Description				Field Data				Field Notes		Well Cons	
Method	Casing	Penetration	Depth	Type, colour/mottling, plasticity/particle size, secondary/minor components, soil origin	Moisture	Consistency/Rel Density	PID (ppm)	Sampling	Odour, staining, groundwater observations/regime, additional information	Depth	Anulus
CORE			0.1	ASPHALT	DL		0.0				
			0.3	FILL: CLAY, LIGHT GREY, LOW PLAST.							
			0.4	PEBBLE INCL. SA							
			0.5	SAND: YELLOW, COARSE, COBBLE INCL. SA	DL		0.0				
				CLAY: ORANGE, GREY MOTTLE, LOW PLAST	DM						
HA			1.0	TERMINATED @ 0.9 m							
			1.5	HA REFUSAL ON CLAY							

Field Notes: BH05-0.2, BH05-0.5, REFUSAL @ 0.9m H/A

Project Name:		TALAUEKA		Project Number:		60687952		Borehole No.:		BH06	
Project Location:		MACQUARIE PARK		Client:		GOODMAN					
PM Name:		S RANDALL		Date Commenced:		22-8-22		Sheet		1 of 1	
Bore Location:				Date Completed:		22-8-22					
Drill Contractor:		EPOCA		Fieldwork Staff:		M TAYLOR					
Drill Model:		Hole Angle:		deg.		Bore Size:		RL			
Drilling Fluid:		Orientation:		deg.		Co-ords:		Permit No.:			

Field Data						Field Notes		Well Construction							
Method	Casing	Penetration	Depth	USCS Classification	Material Description Type, colour/mottling, plasticity/particle size, secondary/minor components, soil origin	Moisture	Consistency/Rel Density	PID (ppm)	Sampling	Odour, staining, groundwater observations/regime, additional information	Well Construction				
											Depth	Anulus	Casing	Anulus	
CORE	HA		0.1		ASPHALT										
			0.2		FILL: DARK CLAY, DARK GREY, COBBLES, SA, LOW PLAST	DL	0.2				BH06-0.1				
			0.3		CLAY: LIGHT ORANGE, WHITE MOTTLE, LOW PLAST	DM	0.0				BH06-0.3				
			0.5		~~CLAY: LIGHT ORANGE, WHITE MOTTLE, LOW PLAST~~										
			0.9		BRITTLE / WEATHERED										
			1.0		REFUSAL @ 0.9m										

ANZ

Service Identification and Clearance Checklist

S4AN-783-FM1

This SIC Checklist must be completed in detail and signed by the SIC Approver, service locating contractor and the AECOM Project Manager or approved Project Team Member prior to undertaking ground disturbance activities.

Project Number 60687982

AECOM PM/Delegate Matthew Taylor

Project Name Goodman Talavera Road

Type of Ground Disturbing Activity Environmental Drilling

Business Line ENV

Expected Date of Ground Disturbance 22/08/2022

Site Address 4-38 Talavera Road, Macquarie Park NSW 2113

Date: 15/08/2022

SECTION 1.1 – PREPARATION AND PLANNING - Completed by PM or approved Project Team Member

Activity	YES (Initial)	If NO, then state reasons or leave comments
Have DBYD (Aus) or Before You Dig (NZ) plans been obtained from utility companies for services in the vicinity of the proposed ground disturbance activities?	MT	
Has a request been made in writing to the site owner/operator for all available as-built drawings/plans for underground services at the site?	MT	
Has a review been conducted of all service plans/ as-built drawings for underground services?	MT	
Has an independent service locator been engaged?	MT	
Has copies of plans been printed to take to site?	MT	

SECTION 1.2 – SIC APPROVER REVIEW AND SIGN OFF
Completed by the PM or Approved Project Team Member prior to SIC Approver review and approval.

CRITICAL SERVICE UTILITIES ANTICIPATED (High Risk/Dangerous)	YES	NO	UNKNOWN	Details / Descriptions (e.g. distance from proposed ground disturbance activities, plans in date, proximity to critical services, identified over-head services requirements)
Electricity (Underground)	X			Underground HV and mains electricity enter the site from Talavera Road (south-west) in two areas, servicing the separate buildings located on site: - Slightly south of the northernmost building of the site, within the approximate vehicle parking area that separates the two buildings. - Perpendicular to Talavera Road in the southernmost building of the site, in the grassed path/entry area to the building. Street and traffic lights are noted along the western boundary (Talavera Road)
Electrical (Overhead)		X		Noted off-site, outside the southern corner of the site on Lane Cove Road
Gas		X		Medium and high pressure gas main identified off-site, along Talavera Road. Plans identify the lines are approximately 1.2 m from the site boundary line.
Hydrocarbons / Fuel / Oil			X	Dangerous goods records of the site and adjacent site indicated that former underground storage tanks (USTs) may be located in the area. Contents of USTs (if present) may have include acetylene and other hydrocarbon compounds.
High pressure water / sewer	X			Water and sewer are identified running along the boundary of the site, on Talavera Road. These utilities do not appear to enter the site boundary, however, it is anticipated that the site is connected to mains water and sewer network. Water mains are visible on Street View adjacent to the southernmost building and within the garden bed of the northernmost building, visible from Talavera Road.
Telecommunications (Optic Fibre)	X			NBN enters the site from Talavera Road, perpendicular to both buildings. These appear to follow the same pathway as the underground electricity (detailed above) for both buildings. Pits are visible on Street View in the sidewalk of Talavera Road, adjacent to both buildings.

Other Service Utilities Anticipated	YES	NO	UNKNOWN	Details / Descriptions (e.g. distance from proposed ground disturbance activities, plans in date, proximity to critical services, identified over-head services requirements)
Telecommunications - Copper	X			Telstra lines enter the site from Talavera Road, follow the same pathway as the underground electricity and NBN services (detailed above) for both buildings.
Water	X			Water and sewer are identified running along the boundary of the site, on Talavera Road.
Sewer	X			Water and sewer are identified running along the boundary of the site, on Talavera Road.
Storm water		X		
Traffic Signals		X		South and west, immediately outside of site boundary.
Street Lights		X		South and west, immediately outside of site boundary.
Independent Service Locator engaged?		Yes		

**If No, SIC Approver may authorise work to be conducted under the variation process.*

Comments by SIC Approver:

SIC Approver Name: Steve Randall

SIC Approver Signature:

Date: 15/08/2022

SECTION 2 - SITE WALKOVER - Completed by PM or approved Project Team Member

Completed By	M TAYLOR					Date	22.8.22	
Identify all visible evidence of the services and assets on this site	Visible Evidence		Services on Plans			Details / Description		
	YES	NO	YES	NO	N/A			
Overhead utilities		X		X				
Above ground indicators of subservice utilities/services that may be leading to/from buildings	X		X			WATER METERS ADJACENT TO #4		
Lights and signs which will require underground power source	X			X		LIGHTING ALONG BOUNDARY		
Gas meters / pipes		X		X				
Telecommunication services such as public phones or ATMs		X		X				
Stormwater drains	X			X		IN CARPARK		
Electrical equipment such as meters or junction boxes	X			X		ADJACENT TO BUILDINGS		
Fire hydrants or water meters	X			X		" " ON TALLAGEA		
Paving scars	X			X		REAR CARPARK #4 & PARKING ARE IN G-10		
Gatic covers, manhole lids or concrete pit covers	X			X		SW PIT COVERS		
Evidence of underground tanks or fuel systems		X		X				
Fuel system vent lines		X		X				
Sewer inspection pits or outlets	X			X		PIT EAST OF #4		
Rail lines or associated infrastructure		X		X				
Other								

NOTE: If visible evidence of a service is sighted during site walkover but not identified on the service plan, it needs to be raised with Service Locator and SIC Approver.

SECTION 2 – SITE WALKOVER - Completed by PM or approved Project Team Member

The following individuals were present during the site walkover:

Name	Affiliation / Organisation / Company	Signature	Date
MATTHEW TAYLOR	AECOM		22.8.22

SECTION 3 - INDEPENDENT SERVICE LOCATING

Completed By		DJORU TUGUN		Date of Markings		22/08/22	
Service Location Contractor		GSDS Core		Photos Taken		☒ YES ☐ NO	
Condition				COMPLETED (Initial)		If not, then provide details	
Plans, drawings, and relevant information have been reviewed? Hard Copies of all plans and drawings shall be provided to contract service locator onsite.				MT			
All critical services on the site have been identified and marked? If critical services have not been identified, intrusive works cannot proceed without approval from SIC Approver				MT			
Where intrusive works are planned within 3 meters of a critical service or 1m of a non-critical service the SIC Approver has authorised works? If work is planned within 3 meters of a critical service, the service/asset owner must have been consulted and provided written approval.				MT			
Location ID	Location Scanned	Location Method (CAT, GPR, CCTV, etc.)	Distance to Nearest Critical Services (m)	List of Services Nearby			
BH01		EM & GPR	3	ELECTRICITY?			
BH02		EM & GPR	3	ELECTRICITY?			
BH03		EM & GPR					
BH04		EM & GPR					
BH05		EM & GPR	3	STORM WATER			
BH06		EM & GPR	2	STORM WATER			
BH07		EM & GPR	3	~~STORM WATER~~ UNKNOWN PIPE			
BH08		EM & GPR	1 & 2	CERUSOR & STORM WATER			

SECTION 4 - HAND CLEARANCE VALIDATION (INTRUSIVE WORKS)

SECTION 4 - HAND CLEARANCE VALIDATION (INTRUSIVE WORKS)						
Completed By		M. TAYLOR		Date of Clearance		22.8.22
Investigation Contractor (if appl.)		~~EEB~~		Clearance Contractor (if appl.)		EPOCA
Borehole ID	Planned Clearance Depth (m)	Actual Clearance Depth (m)	Clearance Method	Max Investigation Hole Diameter (mm)	Actual Clearance Diameter (mm) (Must be 30% greater than max. drill hole diameter)	Confirm cleared & inspected (Supervisors Initials)
BH01	1.5	1.4	H/A	150	> 200	MT
BH02		1.4	H/A		> 200	MT
BH03		1.4	H/A		> 200	MT
BH04		1.5	H/A		> 200	MT
BH05		0.9	H/A		> 200	MT
BH06		0.8	H/A		> 200	MT

[illegible]

Appendix E

Data Validation

DRAFT

Project number:	60687982	Validation by:	M. Taylor	Date: 5-Sept-2022
Client:	Goodman Property Services (Australia) Pty Ltd			
Site:	Talavera Business Park (Stage 1)			
Matrix type:	Soil	Data verified by:	S. Randall	Date: 6-Sept-2022
# Primary Samples:	6			
Laboratory:	ALS (primary) Eurofins (secondary)			
Lab reference:	ALS ES2230080	Project Manager:	S. Randall	
	Eurofins 918240			
Key Issues:	No QA/QC issues were identified in the field or laboratory datasets that could have a material implication to decision-making on the project.			
Field Quality Assurance and Quality Control				
Sampling personnel	Sampling was conducted by suitably qualified AECOM personnel, M. Taylor on 22 August 2022.			
Sampling Methodology	All samples were collected with gloved hand via hand auger.			
Chain of Custody (COC)	Chain of custody documents were completed by M. Taylor on 23 August 2022.			
Analysis Request	Laboratory analysis request and sample receipt notification reviewed and approved by M. Taylor and S. Randall.			
Intra-laboratory duplicate	One intra-laboratory duplicate sample was required to be submitted per 20 primary samples. ES2230080 One intra-laboratory duplicate was collected and submitted to ALS for analysis.			
Inter-laboratory duplicate	One inter-laboratory duplicate sample was required to be submitted per 20 primary samples. One inter-laboratory duplicate was collected and submitted to Eurofins for analysis.			
Rinsate Blank (RB)	One rinsate blank sample was collected per day of sampling and submitted for analysis for the purposes of quality control. Rinsate blank concentrations were below LOR for all soil analytes. Rinsate blank results are displayed in Table T2, Appendix E .			

DRAFT

Trip Blank (TB)	Soil trip blank analytical results were below LOR for all analytes reported, and are presented in Table TE3, Appendix E .
Trip Spike (TS)	A soil trip spike and trip spike control were taken for this data set and results are discussed below in trip spike results.
Handling and preservation	Primary laboratory samples were received by ALS (<i>ES2230080</i>) in appropriate containers and within the recommended temperature range of $\leq 6^{\circ}\text{C}$ (at 4.3°C) Secondary laboratory samples were received by Eurofins (918240) in appropriate containers and slightly outside the recommended temperature range of $\leq 6^{\circ}\text{C}$ (at 7.7°C) The marginal exceedance of the Eurofins sample is likely to have occurred in transit between primary lab ALS and secondary lab Eurofins. This exceedance is not anticipated to significantly impact data quality.
Laboratory QA/QC	
Tests requested/reported	Samples were analysed and reported as requested on the COC.
Laboratory Accreditation	The laboratory analysis was conducted by ALS Environmental and Eurofins, both National Association of Testing Authorities (NATA) accredited laboratories for the analysis requested.
Holding time compliance	Samples were extracted and analysed within recommended holding times.
Frequency of Laboratory QC	The laboratory reported a sufficient frequency of quality control samples to assess whether the results have been reported to an acceptable accuracy and precision, with the exception of the following: <i>ES2230080 (soil)</i> • Laboratory Duplicates (DUP) - o PAH/phenols - o Pesticides - o TRH – Semivolatile Fraction • Matrix Spikes (MS) - o Pesticides
Method Blank (MB)	No MB outliers were detected in all samples analysed.
Laboratory Duplicate (DUP) Relative Percent Difference (RPD)	Soil DUP RPDs were within acceptable control limits.
Laboratory Control Spike (LCS) Recoveries	LCS recoveries (where reported) were within control limits.
Matrix Spike (MS) Recoveries	MS recoveries (where reported) were within control limits.

DRAFT

Surrogate spike (SS) recovery	No SS recovery outliers were detected in samples analysed, with the exception of the following: <i>ES2230080 (soil)</i> Dibromo-DDE The explanation for the SS recovery anomaly was due to recovery limits being below the lower data quality objective.
QA/QC Data Evaluation	
Comparison of ESdat data and Laboratory Results	No anomalous results between ESdat output data and laboratory analysis results were noted.
Limits of Reporting	LORs were sufficiently low to enable assessment against adopted guideline criteria.
Intra-laboratory duplicate RPDs	The intra-laboratory duplicate RPDs were within acceptable control limits
Inter-laboratory duplicate RPDs	The inter-laboratory duplicate (QC200_220822 / BH04_220822) had RPDs >30% for Arsenic (RPD 50%) and Chromium (RPD 45%) and the variance is likely due to the different methods each laboratory uses to analyse the samples. As a conservative measure the higher value will always be considered for any decision making based on the results. RPD calculations for both inter- and intra-laboratory duplicates are presented in Appendix E Table E1: Soil RPD results.
Rinsate Results	Rinsate blank concentrations were below LOR for all soil analytes.
Trip Spike Results	One trip spike sample and one trip control spike sample was collected for this event. Recoveries were above the target 70% indicating that volatilisation was minimal. Results are presented as Appendix E Table E4: Soil QAQC results.
Trip Blank Results	Soil trip blank analytical results were below LOR for all analytes reported.
Comments	
The identified exceptions to field and laboratory QA/QC are not anticipated to have material impacts to the overall accuracy of the data presented or the findings of the soil investigation.	



RPD Table

	Metals								Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons			
	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	C6-C9 fraction	C10-C14 fraction	C15-C28 fraction	C29-C36 fraction	C10-C36 fraction (sum)	C6-C10 fraction	C6-C10 fraction (minus BTEX)(F1)	>C10-C16 (minus Naphthalene)(F2)	>C10-C16 fraction
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.4	2	5	5	0.1	2	5	10	20	50	50	50	10	10	50	50

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<5	<1	87	28	<5	<0.1	97	49	<10	<50	<100	<100	<50	<10	<10
	QC100_220822	Soil	22/08/2022	<5	<1	109	32	<5	<0.1	120	56	<10	<50	<100	<100	<50	<10	<10
RPD				0	0	22	13	0	0	21	13	0	0	0	0	0	0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022	9	<1	19	9	23	<0.1	<2	<5	<10	<50	<100	<100	<50	<10	<10
918240	QC200_220822	Soil	22/08/2022	15	<0.4	30	11	30	<0.1	<5	5.1	<20	<20	<50	<50	<50	<20	<20
RPD				50	0	45	20	26	0	0	2	0	0	0	0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 81 (1 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL)

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

RPD Table

	Polycyclic Aromatic Hydrocarbons			Monocyclic Aromatic Hydrocarbons												Naphthalene	Benzo(a)pyrene TEQ calc (Half)
	>C16-C34 fraction	>C34-C40 fraction	>C10-C40 fraction (sum)	Benzene	Toluene	Ethylbenzene	m&p-Xylene	o-Xylene	Total Xylenes	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Total MAH	Total BTEX	Naphthalene (VOC)	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	100	100	50	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5					<0.2	<1
	QC100_220822	Soil	22/08/2022	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5					<0.2	<1
RPD				0	0	0	0	0	0	0	0	0					0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<100	<100	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5					<0.2	<1
918240	QC200_220822	Soil	22/08/2022	<100	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5		<0.5	0.6
RPD				0	0	0	0	0	0	0	0	0					0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

	Polynuclear Aromatic Hydrocarbons																
	Benzo(a)pyrene TEQ calc (Zero)	Benzo(a)pyrene TEQ calc(PQL)	Naphthalene	Acenaphthylene	Acenaphthene	Anthracene	Fluorene	Phenanthrene	Fluoranthene	Benzo(a)anthracene	Benzo(k)fluoranthene	Benzo(b&j)fluoranthene	Benzo(a)pyrene	Chrysene	Pyrene	Benzo(g,h,i)perylene	Dibenz(a,h)anthracene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Lab Report Number	Field ID	Matrix Type	Date																
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	QC100_220822	Soil	22/08/2022	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
918240	QC200_220822	Soil	22/08/2022	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

			Phenolic Compounds														
	Indeno(1,2,3-cd)pyrene	Sum of PAHs	3/4-Methylphenol (m/p-cresol)	Phenol	2-Chlorophenol	2-Methylphenol (o-Cresol)	3&4-Methylphenol (m&p-Cresol)	Total Cresols	2-Nitrophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	4-Chloro-3-methylphenol	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	4,6-Dinitro-2-methylphenol	Pentachlorophenol
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	1	0.5	0.5	0.2	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	1

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<0.5	<0.5	<1	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2
	QC100_220822	Soil	22/08/2022	<0.5	<0.5	<1	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2
RPD				0	0	0	0	0	0			0	0	0	0	0	0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<0.5	<0.5	<1	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2
918240	QC200_220822	Soil	22/08/2022	<0.5	<0.5		<0.5	<0.5	<0.2	<0.4	<0.5	<1	<0.5	<0.5	<1	<1	<1	<5
RPD				0	0		0	0	0			0	0	0	0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

								Fumigants					Halogenated Aromatic C				
	2,4-Dinitrophenol	2-Cyclohexyl-4,6-dinitrophenol	4-Nitrophenol	Dinoseb	Tetrachlorophenols	Sum of Phenols (halogenated)	Sum of Phenols (non-halogenated)	1,2-Dibromoethane (EDB)	1,2-Dichloropropane	2,2-Dichloropropane	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Bromobenzene	Chlorobenzene	2-Chlorotoluene	4-Chlorotoluene	1,2-Dichlorobenzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	5	20	5	20	10	1	20	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022															
	QC100_220822	Soil	22/08/2022															
RPD																		
ES2230080	BH04_0.5_220822	Soil	22/08/2022															
918240	QC200_220822	Soil	22/08/2022	<5	<20	<5	<20	<10	<1	<20								
RPD																		

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any



RPD Table

	Compounds																	
	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Bromochloromethane	Allyl chloride	Dichlorodifluoromethane (Freon 12)	Chloromethane	Vinyl chloride	Bromomethane	Chloroethane	Trichlorofluoromethane (Freon 11)	1,1-Dichloroethene	Iodomethane	1,1-Dichloroethane	dis-1,2-Dichloroethene	trans-1,2-Dichloroethene	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	

Lab Report Number	Field ID	Matrix Type	Date																	
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5			<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5
	QC100_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5			<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD				0	0	0	0			0	0	0	0	0	0	0	0	0	0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5			<5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5
918240	QC200_220822	Soil	22/08/2022	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD				0	0					0	0	0	0	0	0	0	0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

	Halogenated Aliphatic Compounds																
	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride	1,2-Dichloroethane	Trichloroethene	Dibromomethane	1,1,2-Trichloroethane	1,3-Dichloropropane	Tetrachloroethene	1,1,1,2-Tetrachloroethane	trans-1,4-Dichloro-2-butene	cis-1,4-Dichloro-2-butene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Dichloromethane	Pentachloroethane	1,2-Dibromo-3-chloropropane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
	QC100_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
RPD				0	0	0	0	0	0	0	0	0	0	0	0		0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5
918240	QC200_220822	Soil	22/08/2022	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5		
RPD				0		0	0	0	0	0	0			0	0			

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

	Hexachlorobutadiene	Trihalomethanes				Physico-Chemical Parameters			Oxygenated Compounds			Sulfonated Compounds	Chlorinated Hydrocarbons				
		Bromodichloromethane	Bromoform	Chloroform	Dibromochloromethane	Moisture Content (dried @ 103°C)	Moisture Content	weight of sample	2-Propanone (Acetone)	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Carbon disulfide	Chlorinated hydrocarbons (sum)	Other chlorinated hydrocarbons (sum)	Bolstar (Sulprofos)	Mevinphos (Phosdrin)	Omethoate
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	1	1	0.01	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	2

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5		6.4	53.9							
	QC100_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5		5.0								
RPD				0	0	0	0	0		25								
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<0.5	<0.5	<0.5	<0.5	<0.5		19.7	49.6							
918240	QC200_220822	Soil	22/08/2022		<0.5	<0.5	<0.5	<0.5	16			<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2
RPD					0	0	0	0										

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

	Organophosphorus																
	Priniphos-methyl	Pyrazophos	Azinphos Methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Counaphos	Demeton-O	Demeton-S	Demeton-S-methyl	Diazinon	Dichlorvos	Dimethoate	Disulfoton	EPN
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.2	0.05	0.05	0.05	0.05	0.05	0.05	2	0.2	0.2	0.05	0.05	0.05	0.05	0.2	0.2

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05				<0.05	<0.05	<0.05	<0.05
	QC100_220822	Soil	22/08/2022			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05				<0.05	<0.05	<0.05	<0.05
RPD						0	0	0	0	0	0				0	0	0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05				<0.05	<0.05	<0.05	<0.05
918240	QC200_220822	Soil	22/08/2022	<0.2	<0.2	<0.2			<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
RPD						0			0	0	0				0	0	0	

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

EQL	us Pesticides (OP)																
	Ethion	Ethoprop	Fenamiphos	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Monocrotophos	Naled (Dibrom)	Parathion	Parathion-methyl	Phorate	Primphos-ethyl	Prothiofos	Ronnel	Trichloronate
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	0.05	0.2	0.05	0.2	0.2	0.05	0.05	0.2	0.2	0.2	0.2	0.2	0.2	0.05	0.05	0.2	0.2

Lab Report Number	Field ID	Matrix Type	Date															
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<0.05		<0.05			<0.05	<0.05		<0.2		<0.2	<0.2		<0.05	<0.05
	QC100_220822	Soil	22/08/2022	<0.05		<0.05			<0.05	<0.05		<0.2		<0.2	<0.2		<0.05	<0.05
RPD				0		0			0	0		0		0	0		0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<0.05		<0.05			<0.05	<0.05		<0.2		<0.2	<0.2		<0.05	<0.05
918240	QC200_220822	Soil	22/08/2022	<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2		<0.2
RPD				0					0	0		0		0	0			

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

				Organochlorine													
	Terbufos	Tetrachlorvinphos	Tokuthion	Aldrin	Dieldrin	Aldrin + Dieldrin	α-BHC	β-BHC	γ-BHC	β-BHC (Lindane)	cis-Chlordane	trans-Chlordane	Chlordane	DDD	DDE	DDT	DDT+DDE+DDD
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.2	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Lab Report Number	Field ID	Matrix Type	Date																
ES2230080	BH03_0.2_220822	Soil	22/08/2022				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
	QC100_220822	Soil	22/08/2022				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
RPD							0	0	0	0	0	0	0	0	0	0	0	0	0
ES2230080	BH04_0.5_220822	Soil	22/08/2022				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05
918240	QC200_220822	Soil	22/08/2022	<0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			<0.1	<0.05	<0.05	<0.05
RPD							0	0	0	0	0	0	0			0	0	0	0

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

RPD Table

				Pesticides (OC)													
				Endosulfan	Endosulfan 1	Endosulfan 2	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor epoxide	Hexachlorobenzene (HCB)	Methoxychlor	Toxaphene	Organochlorine pesticides (sum)	Other organochlorine pesticides (sum)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.1	0.1

Lab Report Number	Field ID	Matrix Type	Date														
ES2230080	BH03_0.2_220822	Soil	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2			
	QC100_220822	Soil	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2			
RPD				0	0	0	0	0	0	0	0	0	0	0			
ES2230080	BH04_0.5_220822	Soil	22/08/2022	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2			
918240	QC200_220822	Soil	22/08/2022		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.1	<0.1
RPD					0	0	0	0	0	0	0	0	0	0			

*RPDs have only been considered where a concentration is greater than 1 times the EQL
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier ran
***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any

Rinsate Table

Field Blanks (WATER)
Filter: SDG IN(ALSE-Sydney 23-Aug-22)

SDG	Field ID	ALSE-Sydney 23-Aug-22
Sampled Date/Time	QC000_220822	
Sample Type	22/08/2022 15:00	Rinsate

Chem_Group	ChemName	Units	EQL
Fumigants	1,2-Dibromoethane (EDB)	µg/L	<5
	1,2-Dichloropropane	µg/L	<5
	2,2-Dichloropropane	µg/L	<5
	cis-1,3-Dichloropropene	µg/L	<5
	trans-1,3-Dichloropropene	µg/L	<5
Halogenated Aliphatic Compounds	Dichlorodifluoromethane (Freon 12)	µg/L	<50
	Chloromethane	µg/L	<50
	Vinyl chloride	µg/L	<50
	Bromomethane	µg/L	<50
	Chloroethane	µg/L	<50
	Trichlorofluoromethane (Freon 11)	µg/L	<50
	1,1-Dichloroethene	µg/L	<5
	Iodomethane	µg/L	<5
	1,1,1-Dichloroethane	µg/L	<5
	cis-1,2-Dichloroethene	µg/L	<5
	trans-1,2-Dichloroethene	µg/L	<5
	1,1,1-Trichloroethane	µg/L	<5
	1,1,1-Dichloropropene	µg/L	<5
	Carbon Tetrachloride	µg/L	<5
	1,2-Dichloroethane	µg/L	<5
	Trichloroethene	µg/L	<5
	Dibromomethane	µg/L	<5
	1,1,2-Trichloroethane	µg/L	<5
	1,3-Dichloropropane	µg/L	<5
	Tetrachloroethene	µg/L	<5
	1,1,1,2-Tetrachloroethane	µg/L	<5
	trans-1,4-Dichloro-2-butene	µg/L	<5
	cis-1,4-Dichloro-2-butene	µg/L	<5
	1,1,2,2-Tetrachloroethane	µg/L	<5
	1,2,3-Trichloropropane	µg/L	<5
	Pentachloroethane	µg/L	<5
	1,2-Dibromo-3-chloropropane	µg/L	<5
	Hexachlorobutadiene	µg/L	<5
Halogenated Aromatic Compounds	Bromobenzene	µg/L	<5
	Chlorobenzene	µg/L	<5
	2-Chlorotoluene	µg/L	<5
	4-Chlorotoluene	µg/L	<5
	1,2-Dichlorobenzene	µg/L	<5
	1,3-Dichlorobenzene	µg/L	<5
	1,4-Dichlorobenzene	µg/L	<5
	1,2,3-Trichlorobenzene	µg/L	<5
Metals	Arsenic (Filtered)	mg/L	<0.001
	Cadmium (Filtered)	mg/L	<0.0001
	Chromium (Filtered)	mg/L	<0.001
	Copper (Filtered)	mg/L	<0.001
	Lead (Filtered)	mg/L	<0.001
	Mercury (Filtered)	mg/L	<0.0001
	Nickel (Filtered)	mg/L	<0.001
	Zinc (Filtered)	mg/L	<0.005
Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	<1
	Toluene	µg/L	<2
	Ethylbenzene	µg/L	<2
	m&p-Xylene	µg/L	<2
	o-Xylene	µg/L	<2
	Total Xylenes	µg/L	<2
	Total BTEX	µg/L	<1
Organochlorine Pesticides (OC)	Aldrin	µg/L	<0.5
	Dieldrin	µg/L	<0.5
	Aldrin + Dieldrin	µg/L	<0.5
	α-BHC	µg/L	<0.5
	β-BHC	µg/L	<0.5
	γ-BHC	µg/L	<0.5
	γ-BHC (Lindane)	µg/L	<0.5
	cis-Chlordane	µg/L	<0.5
	trans-Chlordane	µg/L	<0.5
	Chlordane	µg/L	<0.5
	DDD	µg/L	<0.5
	DDE	µg/L	<0.5
	DDT	µg/L	<2
	DDT + DDE + DDD	µg/L	<0.5
	Endosulfan 1	µg/L	<0.5
	Endosulfan 2	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
	Heptachlor	µg/L	<0.5
	Heptachlor epoxide	µg/L	<0.5
	Hexachlorobenzene (HCB)	µg/L	<0.5
	Methoxychlor	µg/L	<2
Organophosphorus Pesticides (OP)	Azinphos Methyl	µg/L	<0.5
	Bromophos-ethyl	µg/L	<0.5
	Carbofenthiion	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
	Fenitrothion	µg/L	<0.5
	Malathion	µg/L	<0.5
	Monocrotophos	µg/L	<2
	Parathion	µg/L	<2
	Parathion-methyl	µg/L	<2
	Phosphos-ethyl	µg/L	<0.5
	Prothiolo	µg/L	<0.5
Phenolic Compounds	3,4-Methylphenol (m,p-cresol)	µg/L	<2
	Phenol	µg/L	<1
	2-Chlorophenol	µg/L	<1
	2-Methylphenol (o-Cresol)	µg/L	<1
	2-Nitrophenol	µg/L	<1
	2,4-Dichlorophenol	µg/L	<1
	2,4-Dimethylphenol	µg/L	<1
	2,6-Dichlorophenol	µg/L	<1
	4-Chloro-3-methylphenol	µg/L	<1
	2,4,5-Trichlorophenol	µg/L	<1
	2,4,6-Trichlorophenol	µg/L	<2
Polynuclear Aromatic Hydrocarbons	Benzo(a)pyrene TEQ calc (Zero)	µg/L	<0.5
	Naphthalene	µg/L	<5
	Acenaphthylene	µg/L	<1
	Acenaphthene	µg/L	<1
	Anthracene	µg/L	<1
	Fluorene	µg/L	<1
	Phenanthrene	µg/L	<1
	Fluoranthene	µg/L	<1
	Benzo(b)fluoranthene	µg/L	<1
	Benzo(k)fluoranthene	µg/L	<1
	Benzo(a)pyrene	µg/L	<0.5
	Chrysene	µg/L	<1
	Pyrene	µg/L	<1
	Benzo(a,h)perylene	µg/L	<1
	Dibenz(a,h)anthracene	µg/L	<1
	Indeno(1,2,3-cd)pyrene	µg/L	<1
	Sum of PAHs	µg/L	<0.5
Total Petroleum Hydrocarbons	C6-C9 fraction	µg/L	<20
	C10-C14 fraction	µg/L	<50
	C15-C28 fraction	µg/L	<100
	C29-C36 fraction	µg/L	<50
	C10-C36 fraction (sum)	µg/L	<50
Total Recoverable Hydrocarbons	C6-C10 fraction	µg/L	<20
	C6-C10 fraction (minus BTEX)(F1)	µg/L	<20
	>C10-C16 (minus Naphthalene)(F2)	µg/L	<100
	>C16-C24 fraction	µg/L	<100
	>C24-C40 fraction	µg/L	<100
	>C10-C40 fraction (sum)	µg/L	<100
Trihalomethanes	Bromodichloromethane	µg/L	<5
	Bromofom	µg/L	<5
	Chloroform	µg/L	<5
	Dibromochloromethane	µg/L	<5

Trip Blank Table

Field Blanks (Soil)
Filler: Lab_Report_Number in ("ES2230080")

Lab Report Number	ES2230080
Field ID	TRIP BLANK
Sampled_Date/Time	18/08/2022 15:00
Sample Type	Trip B

Chem_Group	ChemName	Units	LOD
Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	<0.2
	Toluene	mg/kg	<0.5
	Ethylbenzene	mg/kg	<0.5
	m,p-Xylene	mg/kg	<0.5
	o-Xylene	mg/kg	<0.5
	Total Xylenes	mg/kg	<0.5
	Total BTEX	mg/kg	<0.2
Naphthalene	Naphthalene (VOC)	mg/kg	<1
Total Petroleum Hydrocarbons	C6-C9 fraction	mg/kg	<10
	C10-C14 fraction	mg/kg	50
	C15-C28 fraction	mg/kg	100
	C29-C36 fraction	mg/kg	100
	C10-C36 fraction (sum)	mg/kg	50
Total Recoverable Hydrocarbons	C6-C10 fraction	mg/kg	<10
	C6-C10 fraction (minus BTEX)(F1)	mg/kg	<10
	>C10-C16 (minus Naphthalene)(F2)	mg/kg	50
	>C10-C16 fraction	mg/kg	50
	>C16-C36 fraction	mg/kg	100
	>C34-C40 fraction	mg/kg	100
	>C10-C40 fraction (sum)	mg/kg	50

Trip Spike Table

Trip Spikes

Lab Report Number	Matrix Type	Analysis Batch	Field ID	Sampled Date/Time	Chem Group	Chem Name	Trip Spike Result	Trip Spike Control	Result Units	Spike Recovery %	LCL	UCL	Method Name	Lab Sample ID	Sample Type
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Monocyclic Aromatic Hydrocarbons	Ethylbenzene	5.3	5.6	mg/kg	94.543			EP080: BTEXN	ES2230080016	Trip_S
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Monocyclic Aromatic Hydrocarbons	m,p-Xylene	8.2	8.5	mg/kg	96.471			EP080: BTEXN	ES2230080016	Trip_S
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Monocyclic Aromatic Hydrocarbons	Toluene	6.5	6.7	mg/kg	97.015			EP080: BTEXN	ES2230080016	Trip_S
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Monocyclic Aromatic Hydrocarbons	Total Xylenes	11.8	12.3	mg/kg	95.935			EP080: BTEXN	ES2230080016	Trip_S
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Monocyclic Aromatic Hydrocarbons	Benzene	< 0.2	< 0.2	mg/kg	100			EP080: BTEXN	ES2230080016	Trip_S
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Naphthalene	Naphthalene (VOC)	< 1	< 1	mg/kg	100			EP080: BTEXN	ES2230080016	Trip_S
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Monocyclic Aromatic Hydrocarbons	o-Xylene	3.6	3.8	mg/kg	94.737			EP080: BTEXN	ES2230080016	Trip_S
ES2230080	Soil	TRIP SPIKE		18/08/2022 15:00	Monocyclic Aromatic Hydrocarbons	Total BTEX	23.6	24.6	mg/kg	95.935			EP080: BTEXN	ES2230080016	Trip_S

Trip Spike Recoveries: Where no lab LCL and UCL is available, user defined limits between 90% and 150% have been adopted for non-compliance.

Appendix F

Laboratory Reports

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne

6 Monterey Road
Dandenong South
VIC 3175
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Geelong

19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney

179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra

Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

Brisbane

1/21 Smallwood Place
Murarie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

Newcastle

4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Tel: +61 2 4968 8448
NATA# 1261 Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth

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

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland

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

Christchurch

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

Sample Receipt Advice

Company name: AECOM Aust Pty Ltd Sydney
Contact name: Matthew Taylor
Project name: TALAVERA ROAD
Project ID: 60687982/1.3
Turnaround time: 5 Day
Date/Time received: Aug 25, 2022 10:30 AM
Eurofins reference: 918240

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 7.7 degrees Celsius.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Contact

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

Hannah Mawbey on phone : or by email: HannahMawbey@eurofins.com

Results will be delivered electronically via email to Matthew Taylor - Matthew.taylor@aecom.com.

Note: A copy of these results will also be delivered to the general AECOM Aust Pty Ltd Sydney email address.



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

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091

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

Newcastle
4/52 Industrial Drive
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PO Box 60 Wickham 2293
Tel: +61 2 4968 8448
NATA# 1261 Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

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

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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

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

Company Name: AECOM Aust Pty Ltd Sydney
Address: Level 21, 420 George St
Sydney
NSW 2000

Project Name: TALAVERA ROAD
Project ID: 60687982/1.3

Order No.:
Report #: 918240
Phone: 02 8934 0000
Fax: 02 8934 0001

Received: Aug 25, 2022 10:30 AM
Due: Sep 1, 2022
Priority: 5 Day
Contact Name: Matthew Taylor

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Metals M8	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B4
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	QC200_220822	Aug 22, 2022		Soil	S22-Au0063664	X	X	X	X	X	X
Test Counts						1	1	1	1	1	1

AECOM Aust Pty Ltd Sydney
Level 21, 420 George St
Sydney
NSW 2000



NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Matthew Taylor**

Report **918240-S**
Project name **TALavera ROAD**
Project ID **60687982/1.3**
Received Date **Aug 25, 2022**

Client Sample ID			QC200_220822
Sample Matrix			Soil
Eurofins Sample No.			S22- Au0063664
Date Sampled			Aug 22, 2022
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	107
Volatile Organics			
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5

Client Sample ID			QC200_220822
Sample Matrix			Soil
Eurofins Sample No.			S22-Au0063664
Date Sampled			Aug 22, 2022
Test/Reference	LOR	Unit	
Volatile Organics			
1,3-Dichloropropane	0.5	mg/kg	< 0.5
1,3,5-Trimethylbenzene	0.5	mg/kg	< 0.5
1,4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5
Benzene	0.1	mg/kg	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5
Bromoform	0.5	mg/kg	< 0.5
Bromomethane	0.5	mg/kg	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5
Chloroethane	0.5	mg/kg	< 0.5
Chloroform	0.5	mg/kg	< 0.5
Chloromethane	0.5	mg/kg	< 0.5
cis-1,2-Dichloroethene	0.5	mg/kg	< 0.5
cis-1,3-Dichloropropene	0.5	mg/kg	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1
Iodomethane	0.5	mg/kg	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5
o-Xylene	0.1	mg/kg	< 0.1
Styrene	0.5	mg/kg	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5
Toluene	0.1	mg/kg	< 0.1
trans-1,2-Dichloroethene	0.5	mg/kg	< 0.5
trans-1,3-Dichloropropene	0.5	mg/kg	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3
Total MAH*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5
4-Bromofluorobenzene (surr.)	1	%	107
Toluene-d8 (surr.)	1	%	110

Client Sample ID			QC200_220822
Sample Matrix			Soil
Eurofins Sample No.			S22-Au0063664
Date Sampled			Aug 22, 2022
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	112
p-Terphenyl-d14 (surr.)	1	%	129
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05
α-HCH	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
β-HCH	0.05	mg/kg	< 0.05
δ-HCH	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
γ-HCH (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	0.5	mg/kg	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorodate (surr.)	1	%	102
Tetrachloro-m-xylene (surr.)	1	%	120

Client Sample ID			QC200_220822
Sample Matrix			Soil
Eurofins Sample No.			S22-Au0063664
Date Sampled			Aug 22, 2022
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	115
Phenols (Halogenated)			
2-Chlorophenol	0.5	mg/kg	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	< 1
2,4,6-Trichlorophenol	1	mg/kg	< 1
2,6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1

Client Sample ID			QC200_220822
Sample Matrix			Soil
Eurofins Sample No.			S22-Au0063664
Date Sampled			Aug 22, 2022
Test/Reference	LOR	Unit	
Phenols (non-Halogenated)			
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	< 5
2-Nitrophenol	1	mg/kg	< 1
2,4-Dimethylphenol	0.5	mg/kg	< 0.5
2,4-Dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
Total cresols*	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	112
Total Non-Halogenated Phenol*	20	mg/kg	< 20
Heavy Metals			
Arsenic	2	mg/kg	15
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	30
Copper	5	mg/kg	11
Lead	5	mg/kg	30
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	< 5
Zinc	5	mg/kg	5.1
% Moisture	1	%	16

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Volatile Organics	Sydney	Aug 30, 2022	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Metals M8	Sydney	Aug 30, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Phenols (Halogenated)	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Aug 30, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
% Moisture	Sydney	Aug 29, 2022	14 Days
- Method: LTM-GEN-7080 Moisture			

Company Name: AECOM Aust Pty Ltd Sydney
Address: Level 21, 420 George St
Sydney
NSW 2000

Project Name: TALAVERA ROAD
Project ID: 60687982/1.3

Order No.:
Report #: 918240
Phone: 02 8934 0000
Fax: 02 8934 0001

Received: Aug 25, 2022 10:30 AM
Due: Sep 1, 2022
Priority: 5 Day
Contact Name: Matthew Taylor

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Metals M8	Phenols (Speciated)	Suite B14: OCP/OPP	Volatile Organics	Moisture Set	Eurofins Suite B4
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	QC200_22082 2	Aug 22, 2022		Soil	S22-Au0063664	X	X	X	X	X	X
Test Counts						1	1	1	1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

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

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR: No Limit

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

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

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

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
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	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Volatile Organics							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloromethane	mg/kg	< 0.5			0.5	Pass	
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	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2,4,5-Trichlorophenol	mg/kg	< 1			1	Pass	
2,4,6-Trichlorophenol	mg/kg	< 1			1	Pass	
2,6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4,6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4,6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2,4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2,4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	< 0			20	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	121			70-130	Pass	
Naphthalene	%	114			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	115			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	101			70-130	Pass	
Toluene	%	128			70-130	Pass	
Ethylbenzene	%	126			70-130	Pass	
m&p-Xylenes	%	126			70-130	Pass	
o-Xylene	%	127			70-130	Pass	
Xylenes - Total*	%	127			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1,1-Dichloroethene	%	119			70-130	Pass	
1,1,1-Trichloroethane	%	104			70-130	Pass	
1,2-Dichlorobenzene	%	128			70-130	Pass	
1,2-Dichloroethane	%	127			70-130	Pass	
Trichloroethene	%	117			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	96			70-130	Pass	
Acenaphthylene	%	99			70-130	Pass	
Anthracene	%	104			70-130	Pass	
Benz(a)anthracene	%	93			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	
Benzo(b&j)fluoranthene	%	92			70-130	Pass	
Benzo(g,h,i)perylene	%	95			70-130	Pass	
Benzo(k)fluoranthene	%	130			70-130	Pass	
Chrysene	%	106			70-130	Pass	
Dibenz(a,h)anthracene	%	101			70-130	Pass	
Fluoranthene	%	97			70-130	Pass	
Fluorene	%	109			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Indeno(1.2.3-cd)pyrene	%	104			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	94			70-130	Pass	
Pyrene	%	98			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	98			70-130	Pass	
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	96			70-130	Pass	
4.4'-DDT	%	84			70-130	Pass	
a-HCH	%	108			70-130	Pass	
Aldrin	%	83			70-130	Pass	
b-HCH	%	90			70-130	Pass	
d-HCH	%	87			70-130	Pass	
Dieldrin	%	91			70-130	Pass	
Endosulfan I	%	78			70-130	Pass	
Endosulfan II	%	85			70-130	Pass	
Endosulfan sulphate	%	87			70-130	Pass	
Endrin	%	108			70-130	Pass	
Endrin aldehyde	%	93			70-130	Pass	
Endrin ketone	%	80			70-130	Pass	
g-HCH (Lindane)	%	104			70-130	Pass	
Heptachlor	%	92			70-130	Pass	
Heptachlor epoxide	%	89			70-130	Pass	
Hexachlorobenzene	%	100			70-130	Pass	
Methoxychlor	%	78			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	124			70-130	Pass	
Dimethoate	%	77			70-130	Pass	
Ethion	%	95			70-130	Pass	
Fenitrothion	%	78			70-130	Pass	
Methyl parathion	%	81			70-130	Pass	
Mevinphos	%	76			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	96			25-140	Pass	
2.4-Dichlorophenol	%	92			25-140	Pass	
2.4.5-Trichlorophenol	%	113			25-140	Pass	
2.4.6-Trichlorophenol	%	92			25-140	Pass	
2.6-Dichlorophenol	%	103			25-140	Pass	
4-Chloro-3-methylphenol	%	108			25-140	Pass	
Pentachlorophenol	%	79			25-140	Pass	
Tetrachlorophenols - Total	%	78			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Methyl-4.6-dinitrophenol	%	77			25-140	Pass	
2-Nitrophenol	%	94			25-140	Pass	
2.4-Dimethylphenol	%	95			25-140	Pass	
2-Methylphenol (o-Cresol)	%	102			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	101			25-140	Pass	
4-Nitrophenol	%	97			25-140	Pass	
Dinoseb	%	85			25-140	Pass	
Phenol	%	104			25-140	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery									
Heavy Metals									
Arsenic			%	120			80-120	Pass	
Cadmium			%	113			80-120	Pass	
Chromium			%	113			80-120	Pass	
Copper			%	112			80-120	Pass	
Lead			%	117			80-120	Pass	
Mercury			%	118			80-120	Pass	
Nickel			%	113			80-120	Pass	
Zinc			%	112			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S22-Au0058156	NCP	%	87			70-130	Pass	
TRH C10-C14	N22-Au0058322	NCP	%	94			70-130	Pass	
Naphthalene	S22-Au0066061	NCP	%	83			70-130	Pass	
TRH C6-C10	S22-Au0058156	NCP	%	85			70-130	Pass	
TRH >C10-C16	N22-Au0058322	NCP	%	90			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S22-Au0066061	NCP	%	90			70-130	Pass	
Toluene	S22-Au0066061	NCP	%	79			70-130	Pass	
Ethylbenzene	S22-Au0066061	NCP	%	79			70-130	Pass	
m&p-Xylenes	S22-Au0066061	NCP	%	79			70-130	Pass	
o-Xylene	S22-Au0066061	NCP	%	85			70-130	Pass	
Xylenes - Total*	S22-Au0066061	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S22-Au0064816	NCP	%	103			70-130	Pass	
Acenaphthylene	S22-Au0064816	NCP	%	102			70-130	Pass	
Anthracene	S22-Au0064816	NCP	%	110			70-130	Pass	
Benz(a)anthracene	S22-Au0064816	NCP	%	89			70-130	Pass	
Benzo(a)pyrene	S22-Au0064816	NCP	%	103			70-130	Pass	
Benzo(b&j)fluoranthene	S22-Au0064816	NCP	%	99			70-130	Pass	
Benzo(g,h,i)perylene	S22-Au0064816	NCP	%	89			70-130	Pass	
Benzo(k)fluoranthene	S22-Au0064816	NCP	%	125			70-130	Pass	
Chrysene	S22-Au0064816	NCP	%	118			70-130	Pass	
Dibenz(a,h)anthracene	S22-Au0064816	NCP	%	105			70-130	Pass	
Fluoranthene	S22-Au0064816	NCP	%	109			70-130	Pass	
Fluorene	S22-Au0064816	NCP	%	108			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S22-Au0064816	NCP	%	114			70-130	Pass	
Naphthalene	S22-Au0064816	NCP	%	102			70-130	Pass	
Phenanthrene	S22-Au0064816	NCP	%	99			70-130	Pass	
Pyrene	S22-Au0064816	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S22-Au0058140	NCP	%	78			70-130	Pass	
4,4'-DDD	S22-Au0064816	NCP	%	76			70-130	Pass	
4,4'-DDE	S22-Au0058140	NCP	%	72			70-130	Pass	
4,4'-DDT	S22-Au0064816	NCP	%	97			70-130	Pass	
a-HCH	S22-Au0058140	NCP	%	80			70-130	Pass	
Aldrin	S22-Au0058140	NCP	%	80			70-130	Pass	
b-HCH	S22-Au0064816	NCP	%	85			70-130	Pass	
d-HCH	S22-Au0064816	NCP	%	79			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	S22-Au0058140	NCP	%	71			70-130	Pass	
Endosulfan I	S22-Au0064816	NCP	%	86			70-130	Pass	
Endosulfan II	S22-Au0058140	NCP	%	70			70-130	Pass	
Endosulfan sulphate	S22-Au0058140	NCP	%	71			70-130	Pass	
Endrin	S22-Au0064816	NCP	%	89			70-130	Pass	
Endrin aldehyde	S22-Au0064816	NCP	%	80			70-130	Pass	
Endrin ketone	S22-Au0058140	NCP	%	87			70-130	Pass	
g-HCH (Lindane)	S22-Au0058140	NCP	%	87			70-130	Pass	
Heptachlor	S22-Au0058140	NCP	%	75			70-130	Pass	
Heptachlor epoxide	S22-Au0058140	NCP	%	76			70-130	Pass	
Hexachlorobenzene	S22-Au0058140	NCP	%	78			70-130	Pass	
Methoxychlor	S22-Au0064816	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S22-Au0055122	NCP	%	124			70-130	Pass	
Dimethoate	S22-Au0058140	NCP	%	76			70-130	Pass	
Ethion	S22-Au0055122	NCP	%	110			70-130	Pass	
Fenitrothion	S22-Au0058140	NCP	%	119			70-130	Pass	
Methyl parathion	S22-Au0058140	NCP	%	121			70-130	Pass	
Mevinphos	S22-Au0058140	NCP	%	127			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S22-Au0055122	NCP	%	91			30-130	Pass	
2,4-Dichlorophenol	S22-Au0055122	NCP	%	83			30-130	Pass	
2,4,5-Trichlorophenol	S22-Au0055122	NCP	%	108			30-130	Pass	
2,6-Dichlorophenol	S22-Au0055122	NCP	%	90			30-130	Pass	
4-Chloro-3-methylphenol	S22-Au0055122	NCP	%	90			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Nitrophenol	S22-Au0055122	NCP	%	82			30-130	Pass	
2,4-Dimethylphenol	S22-Au0055122	NCP	%	93			30-130	Pass	
2-Methylphenol (o-Cresol)	S22-Au0055122	NCP	%	92			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S22-Au0055122	NCP	%	98			30-130	Pass	
Phenol	S22-Au0055122	NCP	%	92			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S22-JI0028047	NCP	%	118			75-125	Pass	
Cadmium	S22-JI0028047	NCP	%	107			75-125	Pass	
Chromium	S22-JI0028047	NCP	%	107			75-125	Pass	
Copper	S22-JI0028047	NCP	%	96			75-125	Pass	
Lead	S22-JI0028047	NCP	%	104			75-125	Pass	
Mercury	N22-Au0012441	NCP	%	94			75-125	Pass	
Nickel	S22-JI0028047	NCP	%	106			75-125	Pass	
Zinc	S22-JI0028047	NCP	%	106			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S22-Au0066059	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	N22-Au0058321	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N22-Au0058321	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N22-Au0058321	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Naphthalene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S22-Au0066059	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	N22-Au0058321	NCP	mg/kg	< 50	< 50	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH >C16-C34	N22-Au0058321	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N22-Au0058321	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S22-Au0066059	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S22-Au0066059	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S22-Au0066059	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S22-Au0066059	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S22-Au0066059	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S22-Au0066059	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Styrene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,2-Dichloroethene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1,3-Dichloropropene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S22-Au0066059	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S22-Au0059408	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S22-Au0059408	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	S22-Au0058139	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Chlorpyrifos-methyl	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	S22-Au0059408	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfothion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	S22-Au0059408	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	S22-Au0059408	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	S22-Au0059408	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	S22-Au0069451	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	S22-Au0069451	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	S22-Au0069451	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	S22-Au0069451	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	S22-Au0069451	NCP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	S22-Au0069451	NCP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	S22-Au0069451	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	S22-Au0069451	NCP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	S22-Au0069451	NCP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	S22-Au0069451	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	S22-Au0069451	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	S22-Au0069451	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	S22-Au0069451	NCP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	S22-Au0069451	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	S22-JI0038564	NCP	mg/kg	5.9	7.9	29	30%	Pass
Cadmium	S22-JI0038564	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	S22-JI0038564	NCP	mg/kg	46	31	38	30%	Fail
Copper	S22-JI0038564	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	S22-JI0038564	NCP	mg/kg	27	29	6.9	30%	Pass
Mercury	S22-JI0038564	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	S22-JI0038564	NCP	mg/kg	10	7.1	38	30%	Fail
Zinc	S22-JI0038564	NCP	mg/kg	35	41	18	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	N22-Au0063929	NCP	%	19	21	12	30%	Pass

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised by:

Andrew Black	Analytical Services Manager
Gabriele Cordero	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

Measurement uncertainty of test data is available on request or please [click here](#).

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CERTIFICATE OF ANALYSIS

Work Order : **ES2230080**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **MR STEPHEN RANDALL**
Address : **LEVEL 21 420 GEORGE STREET**
SYDNEY NSW, AUSTRALIA 2000
Telephone : **02 8934 0000**
Project : **60687982/1.3**
Order number : **60687982/1.3**
C-O-C number : **----**
Sampler : **M. TAYLOR**
Site : **TALAVERA ROAD**
Quote number : **EN/004/21**
No. of samples received : **17**
No. of samples analysed : **17**

Page : 1 of 30
Laboratory : Environmental Division Sydney
Contact : Sepan Mahamad
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61 2 8784 8555
Date Samples Received : 23-Aug-2022 16:30
Date Analysis Commenced : 25-Aug-2022
Issue Date : 30-Aug-2022 16:00



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, unless the sampling was conducted by ALS. 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>
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW



General Comments

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

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

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

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

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

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

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained. 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: 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.
-



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.2_220822	BH01_0.5_220822	BH02_0.2_220822	BH02_0.5_220822	BH03_0.2_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-001	ES2230080-002	ES2230080-003	ES2230080-004	ES2230080-005
				Result	Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		9.7	13.4	10.1	10.0	6.4
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		44.5	50.1	69.9	43.0	53.9
APPROVED IDENTIFIER:	----	-	--		B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER
Synthetic Mineral Fibre	----	0.1	g/kg		No	No	No	No	No
Organic Fibre	----	0.1	g/kg		No	No	No	No	No
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	6	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		13	7	102	15	87
Copper	7440-50-8	5	mg/kg		<5	7	28	7	28
Lead	7439-92-1	5	mg/kg		<5	32	<5	13	<5
Nickel	7440-02-0	2	mg/kg		11	<2	116	3	97
Zinc	7440-66-6	5	mg/kg		9	<5	48	8	49
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<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	<0.05	<0.05
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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.2_220822	BH01_0.5_220822	BH02_0.2_220822	BH02_0.5_220822	BH03_0.2_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-001	ES2230080-002	ES2230080-003	ES2230080-004	ES2230080-005
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
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
^ 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
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
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.2_220822	BH01_0.5_220822	BH02_0.2_220822	BH02_0.5_220822	BH03_0.2_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-001	ES2230080-002	ES2230080-003	ES2230080-004	ES2230080-005
					Result	Result	Result	Result	Result
EP074D: Fumigants - Continued									
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		<5	<5	<5	<5	<5
Chloromethane	74-87-3	5	mg/kg		<5	<5	<5	<5	<5
Vinyl chloride	75-01-4	5	mg/kg		<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg		<5	<5	<5	<5	<5
Chloroethane	75-00-3	5	mg/kg		<5	<5	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg		<5	<5	<5	<5	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.2_220822	BH01_0.5_220822	BH02_0.2_220822	BH02_0.5_220822	BH03_0.2_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-001	ES2230080-002	ES2230080-003	ES2230080-004	ES2230080-005
					Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued									
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<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	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<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	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<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	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	<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	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.2_220822	BH01_0.5_220822	BH02_0.2_220822	BH02_0.5_220822	BH03_0.2_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-001	ES2230080-002	ES2230080-003	ES2230080-004	ES2230080-005
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons									
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		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
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		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.2_220822	BH01_0.5_220822	BH02_0.2_220822	BH02_0.5_220822	BH03_0.2_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-001	ES2230080-002	ES2230080-003	ES2230080-004	ES2230080-005
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
^ 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
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		94.3	73.0	79.3	77.5	99.8
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		99.7	77.6	86.4	74.6	102
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.5	%		90.3	94.2	100	94.5	93.8
Toluene-D8	2037-26-5	0.5	%		99.5	107	115	109	112
4-Bromofluorobenzene	460-00-4	0.5	%		111	113	117	110	118
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		63.7	73.5	65.4	65.0	66.4
2-Chlorophenol-D4	93951-73-6	0.5	%		86.0	82.3	83.6	83.1	85.5
2,4,6-Tribromophenol	118-79-6	0.5	%		53.6	65.6	61.2	60.5	61.8
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		91.5	98.1	90.6	90.4	93.1
Anthracene-d10	1719-06-8	0.5	%		94.8	94.1	94.9	93.7	96.6
4-Terphenyl-d14	1718-51-0	0.5	%		84.7	84.2	84.6	83.6	85.7
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		88.6	92.2	97.3	92.0	90.9
Toluene-D8	2037-26-5	0.2	%		89.2	95.6	103	97.8	100
4-Bromofluorobenzene	460-00-4	0.2	%		121	120	122	117	124



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_0.5_220822	BH04_0.2_220822	BH04_0.5_220822	BH05_0.2_220822	BH05_0.5_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-006	ES2230080-007	ES2230080-008	ES2230080-009	ES2230080-010
				Result	Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		15.6	6.8	19.7	17.7	15.9
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		41.4	69.3	49.6	44.3	37.5
APPROVED IDENTIFIER:	----	-	--		B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER	B.SCHRADER
Synthetic Mineral Fibre	----	0.1	g/kg		No	No	No	No	No
Organic Fibre	----	0.1	g/kg		No	No	No	No	No
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		7	<5	9	<5	10
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		29	11	19	11	15
Copper	7440-50-8	5	mg/kg		10	74	9	70	8
Lead	7439-92-1	5	mg/kg		18	<5	23	<5	21
Nickel	7440-02-0	2	mg/kg		16	146	<2	88	<2
Zinc	7440-66-6	5	mg/kg		10	42	<5	39	<5
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<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	<0.05	<0.05
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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_0.5_220822	BH04_0.2_220822	BH04_0.5_220822	BH05_0.2_220822	BH05_0.5_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-006	ES2230080-007	ES2230080-008	ES2230080-009	ES2230080-010
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
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
^ 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
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
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_0.5_220822	BH04_0.2_220822	BH04_0.5_220822	BH05_0.2_220822	BH05_0.5_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-006	ES2230080-007	ES2230080-008	ES2230080-009	ES2230080-010
					Result	Result	Result	Result	Result
EP074D: Fumigants - Continued									
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		<5	<5	<5	<5	<5
Chloromethane	74-87-3	5	mg/kg		<5	<5	<5	<5	<5
Vinyl chloride	75-01-4	5	mg/kg		<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg		<5	<5	<5	<5	<5
Chloroethane	75-00-3	5	mg/kg		<5	<5	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg		<5	<5	<5	<5	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_0.5_220822	BH04_0.2_220822	BH04_0.5_220822	BH05_0.2_220822	BH05_0.5_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-006	ES2230080-007	ES2230080-008	ES2230080-009	ES2230080-010
					Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued									
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<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	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<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	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<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	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	<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	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH03_0.5_220822	BH04_0.2_220822	BH04_0.5_220822	BH05_0.2_220822	BH05_0.5_220822
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2230080-006	ES2230080-007	ES2230080-008	ES2230080-009	ES2230080-010
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
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	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
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	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
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



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_0.5_220822	BH04_0.2_220822	BH04_0.5_220822	BH05_0.2_220822	BH05_0.5_220822
Sampling date / time					22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit		ES2230080-006	ES2230080-007	ES2230080-008	ES2230080-009	ES2230080-010
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
^ 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
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		83.3	83.6	85.7	91.7	84.3
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		88.7	90.6	89.2	93.3	81.2
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.5	%		93.8	100	90.3	88.3	96.6
Toluene-D8	2037-26-5	0.5	%		112	115	106	102	116
4-Bromofluorobenzene	460-00-4	0.5	%		114	114	109	102	112
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		74.4	64.3	64.6	65.2	64.6
2-Chlorophenol-D4	93951-73-6	0.5	%		82.7	82.6	83.0	80.9	83.2
2,4,6-Tribromophenol	118-79-6	0.5	%		71.0	62.3	61.9	56.5	56.7
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		94.1	86.1	88.7	88.2	92.7
Anthracene-d10	1719-06-8	0.5	%		96.3	93.1	94.9	91.6	97.4
4-Terphenyl-d14	1718-51-0	0.5	%		83.3	82.8	83.7	81.5	85.5
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		91.2	97.9	88.7	86.2	93.7
Toluene-D8	2037-26-5	0.2	%		101	103	94.6	90.3	104
4-Bromofluorobenzene	460-00-4	0.2	%		121	119	114	110	119



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH06_0.1_220822	BH05_0.3_220822 BH06_0.3_220822	QC100_220822	TRIP BLANK	TRIP SPIKE
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	18-Aug-2022 00:00	18-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2230080-011	ES2230080-012	ES2230080-013	ES2230080-015	ES2230080-016
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	15.5	23.4	5.0	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	----	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	----	----	----
Asbestos Type	1332-21-4	-	--	-	-	----	----	----
Sample weight (dry)	----	0.01	g	55.6	49.9	----	----	----
APPROVED IDENTIFIER:	----	-	--	B.SCHRADER	B.SCHRADER	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	----	----	----
Organic Fibre	----	0.1	g/kg	No	No	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	9	<5	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	14	6	109	----	----
Copper	7440-50-8	5	mg/kg	46	13	32	----	----
Lead	7439-92-1	5	mg/kg	<5	16	<5	----	----
Nickel	7440-02-0	2	mg/kg	120	6	120	----	----
Zinc	7440-66-6	5	mg/kg	37	<5	56	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
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	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH06_0.1_220822	BH05_0.3_220822 BH06_0.3_220822	QC100_220822	TRIP BLANK	TRIP SPIKE
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	18-Aug-2022 00:00	18-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2230080-011	ES2230080-012	ES2230080-013	ES2230080-015	ES2230080-016
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
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	72-54-8/72-55-9/5 0-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP074D: Fumigants								
2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH06_0.1_220822	BH05_0.3_220822 BH06_0.3_220822	QC100_220822	TRIP BLANK	TRIP SPIKE
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	18-Aug-2022 00:00	18-Aug-2022 00:00	
Compound	CAS Number	LOR	Unit	ES2230080-011	ES2230080-012	ES2230080-013	ES2230080-015	ES2230080-016	
				Result	Result	Result	Result	Result	
EP074D: Fumigants - Continued									
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<5	----	----	
Chloromethane	74-87-3	5	mg/kg	<5	<5	<5	----	----	
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<5	----	----	
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	----	----	
Chloroethane	75-00-3	5	mg/kg	<5	<5	<5	----	----	
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<5	----	----	
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----	
EP074F: Halogenated Aromatic Compounds									



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH06_0.1_220822	BH05_0.3_220822 BH06_0.3_220822	QC100_220822	TRIP BLANK	TRIP SPIKE
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	18-Aug-2022 00:00	18-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2230080-011	ES2230080-012	ES2230080-013	ES2230080-015	ES2230080-016
				Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP075(SIM)A: Phenolic Compounds								
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	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH06_0.1_220822	BH05_0.3_220822 BH06_0.3_220822	QC100_220822	TRIP BLANK	TRIP SPIKE
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	18-Aug-2022 00:00	18-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2230080-011	ES2230080-012	ES2230080-013	ES2230080-015	ES2230080-016
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<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	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	6.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	5.3



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH06_0.1_220822	BH05_0.3_220822 BH06_0.3_220822	QC100_220822	TRIP BLANK	TRIP SPIKE
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	18-Aug-2022 00:00	18-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2230080-011	ES2230080-012	ES2230080-013	ES2230080-015	ES2230080-016
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	8.2
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	3.6
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	23.6
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	11.8
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	120	87.9	69.6	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	124	85.6	76.8	----	----
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.5	%	89.5	89.0	101	----	----
Toluene-D8	2037-26-5	0.5	%	104	101	114	----	----
4-Bromofluorobenzene	460-00-4	0.5	%	108	102	117	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	79.5	78.5	81.7	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	84.7	83.9	87.3	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%	55.5	53.5	55.2	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	90.7	90.6	94.1	----	----
Anthracene-d10	1719-06-8	0.5	%	94.8	94.4	96.4	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	83.1	84.0	87.3	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	87.1	87.5	98.6	96.0	85.3
Toluene-D8	2037-26-5	0.2	%	93.0	90.2	102	93.0	85.0
4-Bromofluorobenzene	460-00-4	0.2	%	114	109	124	76.1	87.3



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TS CONTROL	----	----	----	----
				Sampling date / time	18-Aug-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2230080-017	-----	-----	-----	-----
				Result	----	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		6.7	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		5.6	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		8.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		3.8	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		24.6	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		12.3	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		82.8	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		83.8	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		85.8	----	----	----	----



Analytical Results

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

Sample ID

QC300_220822

Sampling date / time

22-Aug-2022 00:00

Compound

CAS Number

LOR

Unit

ES2230080-014

Result

EG020F: Dissolved Metals by ICP-MS

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	----	----	----	----

EG035F: Dissolved Mercury by FIMS

Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
---------	-----------	--------	------	---------	------	------	------	------

EP068A: Organochlorine Pesticides (OC)

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	72-54-8/72-55-9/50-2	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)

Sample ID

QC300_220822

Sampling date / time

22-Aug-2022 00:00

Compound

CAS Number

LOR

Unit

ES2230080-014

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	----	----	----	----

EP074D: Fumigants

2,2-Dichloropropane	594-20-7	5	µg/L	<5	----	----	----	----
1,2-Dichloropropane	78-87-5	5	µg/L	<5	----	----	----	----
cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	----	----	----	----
trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	----	----	----	----
1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	----	----	----	----

EP074E: Halogenated Aliphatic Compounds

Dichlorodifluoromethane	75-71-8	50	µg/L	<50	----	----	----	----
Chloromethane	74-87-3	50	µg/L	<50	----	----	----	----
Vinyl chloride	75-01-4	50	µg/L	<50	----	----	----	----
Bromomethane	74-83-9	50	µg/L	<50	----	----	----	----
Chloroethane	75-00-3	50	µg/L	<50	----	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L	<50	----	----	----	----
1,1-Dichloroethene	75-35-4	5	µg/L	<5	----	----	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

QC300_220822

Sampling date / time

22-Aug-2022 00:00

Compound

CAS Number

LOR

Unit

ES2230080-014

Result

EP074E: Halogenated Aliphatic Compounds - Continued

Iodomethane	74-88-4	5	µg/L	<5	----	----	----	----
trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	----	----	----	----
1,1-Dichloroethane	75-34-3	5	µg/L	<5	----	----	----	----
cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	----	----	----	----
1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	----	----	----	----
1,1-Dichloropropylene	563-58-6	5	µg/L	<5	----	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L	<5	----	----	----	----
1,2-Dichloroethane	107-06-2	5	µg/L	<5	----	----	----	----
Trichloroethene	79-01-6	5	µg/L	<5	----	----	----	----
Dibromomethane	74-95-3	5	µg/L	<5	----	----	----	----
1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	----	----	----	----
1,3-Dichloropropane	142-28-9	5	µg/L	<5	----	----	----	----
Tetrachloroethene	127-18-4	5	µg/L	<5	----	----	----	----
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	----	----	----	----
trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	----	----	----	----
cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	----	----	----	----
1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	----	----	----	----
1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	----	----	----	----
Pentachloroethane	76-01-7	5	µg/L	<5	----	----	----	----
1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	----	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L	<5	----	----	----	----

EP074F: Halogenated Aromatic Compounds

Chlorobenzene	108-90-7	5	µg/L	<5	----	----	----	----
Bromobenzene	108-86-1	5	µg/L	<5	----	----	----	----
2-Chlorotoluene	95-49-8	5	µg/L	<5	----	----	----	----
4-Chlorotoluene	106-43-4	5	µg/L	<5	----	----	----	----
1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	----	----	----	----
1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	----	----	----	----
1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	----	----	----	----
1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	----	----	----	----
1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	----	----	----	----

EP074G: Trihalomethanes

Chloroform	67-66-3	5	µg/L	<5	----	----	----	----
Bromodichloromethane	75-27-4	5	µg/L	<5	----	----	----	----



Analytical Results

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

Sample ID

QC300_220822

Sampling date / time

22-Aug-2022 00:00

Compound

CAS Number

LOR

Unit

ES2230080-014

Result

EP074G: Trihalomethanes - Continued

Dibromochloromethane	124-48-1	5	µg/L	<5	----	----	----	----
Bromoform	75-25-2	5	µg/L	<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

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	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC300_220822	----	----	----	----
Sampling date / time					22-Aug-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2230080-014	-----	-----	-----	-----
Result						----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<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	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<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									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ Total Xylenes	----	2	µg/L		<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.5	%		64.8	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.5	%		74.9	----	----	----	----
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	17060-07-0	5	%		85.5	----	----	----	----
Toluene-D8	2037-26-5	5	%		90.7	----	----	----	----
4-Bromofluorobenzene	460-00-4	5	%		92.2	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		20.8	----	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC300_220822	----	----	----	----
				Sampling date / time	22-Aug-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2230080-014	-----	-----	-----	-----
				Result	----	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	1.0	%		55.5	----	----	----	----
2,4,6-Tribromophenol	118-79-6	1.0	%		39.3	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		53.5	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		69.5	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		75.5	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		78.4	----	----	----	----
Toluene-D8	2037-26-5	2	%		90.8	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		103	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	BH01_0.2_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH01_0.5_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH02_0.2_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH02_0.5_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH03_0.2_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH03_0.5_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH04_0.2_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH04_0.5_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH05_0.2_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH05_0.5_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH06_0.1_220822 - 22-Aug-2022 00:00	A soil sample.
EA200: Description	BH05_0.3_220822BH06_0.3_220822 - 22-Aug-2022 00:00	A soil sample.



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	67	111
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	67	111
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2,4,6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112

Page : 30 of 30
Work Order : ES2230080
Client : AECOM AUSTRALIA PTY LTD
Project : 60687982/1.3



Sub-Matrix: WATER		<i>Recovery Limits (%)</i>	
<i>Compound</i>	<i>CAS Number</i>	<i>Low</i>	<i>High</i>
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: ES2230080	Page	: 1 of 26
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR STEPHEN RANDALL	Contact	: Sepan Mahamad
Address	: LEVEL 21 420 GEORGE STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 8934 0000	Telephone	: +61 2 8784 8555
Project	: 60687982/1.3	Date Samples Received	: 23-Aug-2022
Order number	: 60687982/1.3	Date Analysis Commenced	: 25-Aug-2022
C-O-C number	: ----	Issue Date	: 30-Aug-2022
Sampler	: M. TAYLOR		
Site	: TALAVERA ROAD		
Quote number	: EN/004/21		
No. of samples received	: 17		
No. of samples analysed	: 17		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. 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>
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW



General Comments

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

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

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

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	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4543500)									
ES2230080-001	BH01_0.2_220822	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	14	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	11	10	15.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	9	12	26.7	No Limit
ES2230080-011	BH06_0.1_220822	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	14	10	34.3	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	120	102	15.6	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	46	53	15.2	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	37	35	6.0	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4543502)									
ES2229982-006	Anonymous	EA055: Moisture Content	----	0.1	%	18.2	19.4	6.7	0% - 50%
ES2230030-011	Anonymous	EA055: Moisture Content	----	0.1	%	22.3	21.9	1.9	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4543503)									
ES2230080-007	BH04_0.2_220822	EA055: Moisture Content	----	0.1	%	6.8	6.0	12.9	No Limit
EW2203904-003	Anonymous	EA055: Moisture Content	----	0.1	%	17.2	17.8	3.8	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4543499)									
ES2230080-001	BH01_0.2_220822	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4539081)									
ES2229281-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2230080-005	BH03_0.2_220822	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4539081) - continued									
ES2230080-005	BH03_0.2_220822	EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4539081)									
ES2229281-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2230080-005	BH03_0.2_220822	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4539081) - continued									
ES2230080-005	BH03_0.2_220822	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP074D: Fumigants (QC Lot: 4542769)									
ES2230080-001	BH01_0.2_220822	EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4542769)									
ES2230080-001	BH01_0.2_220822	EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4542769) - continued									
ES2230080-001	BH01_0.2_220822	EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 4542769)									
ES2230080-001	BH01_0.2_220822	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074F: Halogenated Aromatic Compounds (QC Lot: 4542769) - continued									
ES2230080-011	BH06_0.1_220822	EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 4542769)									
ES2230080-001	BH01_0.2_220822	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 4539080)									
ES2229281-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2230080-005	BH03_0.2_220822	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075(SIM)A: Phenolic Compounds (QC Lot: 4539080) - continued									
ES2230080-005	BH03_0.2_220822	EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4539080)									
ES2229281-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			205-82-3						
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		ES2230080-005	BH03_0.2_220822	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5
EP075(SIM): Acenaphthylene	208-96-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Acenaphthene	83-32-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Fluorene	86-73-7			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Phenanthrene	85-01-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Anthracene	120-12-7			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Fluoranthene	206-44-0			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Pyrene	129-00-0			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Benz(a)anthracene	56-55-3			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Chrysene	218-01-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
	205-82-3								
EP075(SIM): Benzo(k)fluoranthene	207-08-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Benzo(a)pyrene	50-32-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Dibenz(a,h)anthracene	53-70-3			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM): Benzo(g,h,i)perylene	191-24-2			0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4539080) - continued									
ES2230080-005	BH03_0.2_220822	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4539079)									
ES2229281-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2230080-005	BH03_0.2_220822	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4542768)									
ES2230080-001	BH01_0.2_220822	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4543673)									
ES2230282-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EW2203916-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4539079)									
ES2229281-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2230080-005	BH03_0.2_220822	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4542768)									
ES2230080-001	BH01_0.2_220822	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4543673)									
ES2230282-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EW2203916-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4542768)									
ES2230080-001	BH01_0.2_220822	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2230080-011	BH06_0.1_220822	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 4542768) - continued									
ES2230080-011	BH06_0.1_220822	EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		106-42-3							
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 4543673)									
ES2230282-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		106-42-3							
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EW2203916-003	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		106-42-3							
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4542365)									
EW2203842-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.005	<0.005	0.0	No Limit
EW2203842-012	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.032	0.032	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.037	0.038	0.0	0% - 20%
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.007	0.008	22.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.305	0.311	1.8	0% - 20%
EG035F: Dissolved Mercury by FIMS (QC Lot: 4542366)									
ES2230169-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074D: Fumigants (QC Lot: 4544102)									
ES2230065-006	Anonymous	EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
ES2230439-005	Anonymous	EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4544102)									
ES2230065-006	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
ES2230439-005	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 4544102) - continued									
ES2230439-005	Anonymous	EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 4544102)									
ES2230065-006	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
ES2230439-005	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074F: Halogenated Aromatic Compounds (QC Lot: 4544102) - continued									
ES2230439-005	Anonymous	EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 4544102)									
ES2230065-006	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit
ES2230439-005	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	17	16	9.6	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4538715)									
ES2230029-005	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4544103)									
ES2230065-006	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2230439-005	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4538715)									
ES2230029-005	Anonymous	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4544103)									
ES2230065-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2230439-005	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4544103)									
ES2230065-006	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
ES2230439-005	Anonymous	EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
		EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 4544103) - continued									
ES2230439-005	Anonymous	EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (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 Sample (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) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			LCS	Low
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4543500)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	104	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	113	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	117	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	107	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	99.0	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	100	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	96.5	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4543499)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	90.8	70.0	125
EP068A: Organochlorine Pesticides (OC) (QCLot: 4539081)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	87.5	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.9	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	87.5	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.7	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	66.0	116
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.5	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	69.0	115
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	62.0	124
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	83.2	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	83.0	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4539081)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.4	62.0	128



Sub-Matrix: **SOIL**

Method: Compound				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
							Low	High
CAS Number	LOR	Unit						
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4539081) - continued								
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	92.7	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	85.2	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	81.2	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	87.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	102	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	87.7	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	85.3	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	75.4	41.0	123
EP074D: Fumigants (QCLot: 4542769)								
EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	85.4	60.0	126
EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	92.8	68.0	124
EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	85.8	51.0	119
EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	84.9	52.0	114
EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	98.4	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 4542769)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	75.3	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	84.2	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	83.8	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	91.2	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	83.3	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	83.7	49.0	135
EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	85.6	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	74.1	43.0	129
EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	82.1	64.0	120
EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	69.4	67.0	125
EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	92.0	69.0	121
EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	88.3	65.0	117
EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	81.4	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	81.6	59.0	125
EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	93.2	65.0	125



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP074E: Halogenated Aliphatic Compounds (QCLot: 4542769) - continued								
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	86.7	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	98.2	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	99.6	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	99.5	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	94.6	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	90.8	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	81.6	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	88.4	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	101	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	104	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	77.8	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	88.6	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	89.2	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 4542769)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	95.2	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	86.9	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	87.4	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	83.8	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	89.4	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	89.4	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	92.5	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	91.8	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	95.6	52.0	122
EP074G: Trihalomethanes (QCLot: 4542769)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	90.5	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	86.9	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	89.4	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	81.8	60.0	126
EP075(SIM)A: Phenolic Compounds (QCLot: 4539080)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	93.2	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	91.6	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	90.8	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	95.1	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	73.1	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	88.0	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	86.7	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	91.0	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	95.0	70.0	116

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)A: Phenolic Compounds (QCLot: 4539080) - continued								
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	78.5	54.0	114
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	83.6	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	39.1	10.0	80.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4539080)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	98.7	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	94.3	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.9	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	88.0	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	97.5	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	98.1	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	98.0	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	99.4	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	88.8	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	93.1	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	6 mg/kg	89.8	68.0	116
	205-82-3							
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	97.7	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	90.3	70.0	126
EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	93.2	61.0	121
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	92.7	62.0	118
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	91.8	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4539079)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	88.7	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	86.2	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	87.5	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4542768)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	120	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4543673)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	115	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4539079)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	88.6	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	86.2	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	88.8	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4542768)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	119	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4543673)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	114	68.4	128
EP080: BTEXN (QCLot: 4542768)								



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
						Concentration	LCS	Low	High
EP080: BTEXN (QCLot: 4542768) - continued									
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	107	62.0	116	
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	109	67.0	121	
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	101	65.0	117	
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	103	66.0	118	
	106-42-3								
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	104	68.0	120	
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	103	63.0	119	
EP080: BTEXN (QCLot: 4543673)									
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	99.0	62.0	116	
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	96.1	67.0	121	
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	91.0	65.0	117	
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	2 mg/kg	93.2	66.0	118	
	106-42-3								
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	92.1	68.0	120	
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	97.6	63.0	119	

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG020F: Dissolved Metals by ICP-MS (QCLot: 4542365)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	87.6	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	90.6	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	89.5	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	88.5	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	86.1	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	86.1	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	87.5	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4542366)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	89.9	83.0	105
EP068A: Organochlorine Pesticides (OC) (QCLot: 4538717)								
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	83.2	64.9	107
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	80.8	58.3	111
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	87.6	69.0	117
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	84.2	70.0	112
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	88.5	68.9	110
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	83.9	65.2	108
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	85.2	65.8	109
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	85.5	67.1	107
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	81.2	64.1	110



Sub-Matrix: **WATER**

Method: Compound				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
							Low	High
CAS Number	LOR	Unit	Result					
EP068A: Organochlorine Pesticides (OC) (QCLot: 4538717) - continued								
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	89.0	66.7	112
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	81.7	63.2	111
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	85.6	65.2	113
EP068: 4,4'-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	84.4	66.0	112
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	104	65.2	113
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	77.2	67.3	114
EP068: 4,4'-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	82.9	72.0	122
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	85.1	66.9	109
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	75.5	65.2	112
EP068: 4,4'-DDT	50-29-3	2	µg/L	<2.0	5 µg/L	80.0	65.2	112
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	80.6	63.8	110
EP068: Methoxychlor	72-43-5	2	µg/L	<2.0	5 µg/L	84.5	61.1	114
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4538717)								
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	5 µg/L	91.2	65.6	114
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	5 µg/L	84.8	63.7	113
EP068: Monocrotophos	6923-22-4	2	µg/L	<2.0	5 µg/L	25.1	19.7	48.0
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	5 µg/L	97.3	69.5	110
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	5 µg/L	86.3	71.1	110
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	5 µg/L	87.2	77.0	119
EP068: Parathion-methyl	298-00-0	2	µg/L	<2.0	5 µg/L	85.8	70.0	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5	5 µg/L	93.2	68.4	116
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	5 µg/L	85.3	68.6	112
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	5 µg/L	86.6	75.0	119
EP068: Parathion	56-38-2	2	µg/L	<2.0	5 µg/L	92.7	67.0	121
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	5 µg/L	85.4	69.0	121
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	5 µg/L	104	71.8	110
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	5 µg/L	76.5	67.5	112
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	5 µg/L	101	64.1	116
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	5 µg/L	87.7	67.8	114
EP068: Ethion	563-12-2	0.5	µg/L	<0.5	5 µg/L	84.1	74.0	120
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	5 µg/L	82.1	66.2	114
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	5 µg/L	90.9	51.6	128
EP074D: Fumigants (QCLot: 4544102)								
EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	10 µg/L	90.7	68.0	122
EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	10 µg/L	85.8	76.0	118
EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	10 µg/L	85.1	62.0	120
EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	10 µg/L	84.5	60.0	114
EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	10 µg/L	85.6	69.0	117

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 4544102)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	64.7	60.6	138
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	75.4	67.4	130
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	112	69.4	129
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	70.8	56.0	140
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	95.8	61.0	139
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	88.9	69.0	131
EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	89.1	70.0	124
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	76.8	70.2	128
EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	88.7	74.0	118
EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	89.8	74.0	120
EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	88.8	77.0	119
EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	90.9	67.0	119
EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	89.6	73.0	119
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	88.3	62.0	120
EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	83.1	73.0	123
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	88.0	76.0	118
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	84.4	73.0	119
EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	91.9	72.0	126
EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	87.9	71.0	129
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	87.8	72.0	124
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	86.5	66.0	114
EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	95.4	60.0	120
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	92.4	70.6	128
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	88.4	70.0	124
EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	88.2	74.0	126
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	98.3	71.8	126
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	93.9	66.4	136
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	99.7	58.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 4544102)								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	10 µg/L	92.0	79.0	117
EP074: Bromobenzene	108-86-1	5	µg/L	<5	10 µg/L	97.7	76.0	116
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	10 µg/L	105	73.0	119
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	10 µg/L	104	73.0	119
EP074: 1.3-Dichlorobenzene	541-73-1	5	µg/L	<5	10 µg/L	101	75.0	117
EP074: 1.4-Dichlorobenzene	106-46-7	5	µg/L	<5	10 µg/L	98.6	74.0	118
EP074: 1.2-Dichlorobenzene	95-50-1	5	µg/L	<5	10 µg/L	97.4	75.0	117
EP074: 1.2.4-Trichlorobenzene	120-82-1	5	µg/L	<5	10 µg/L	99.4	61.0	125
EP074: 1.2.3-Trichlorobenzene	87-61-6	5	µg/L	<5	10 µg/L	92.0	67.0	123
EP074G: Trihalomethanes (QCLot: 4544102)								



Sub-Matrix: **WATER**

Method: Compound				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
CAS Number	LOR	Unit						
EP074G: Trihalomethanes (QCLot: 4544102) - continued								
EP074: Chloroform	67-66-3	5	µg/L	<5	10 µg/L	87.1	72.0	120
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	10 µg/L	86.8	64.0	118
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	10 µg/L	88.4	65.0	115
EP074: Bromoform	75-25-2	5	µg/L	<5	10 µg/L	83.0	73.5	126
EP075(SIM)A: Phenolic Compounds (QCLot: 4538716)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	38.8	24.5	61.9
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	73.0	52.0	90.0
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	66.3	51.0	91.0
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	60.3	44.0	88.0
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	74.1	48.0	100
EP075(SIM): 2,4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	66.3	49.0	99.0
EP075(SIM): 2,4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	74.2	53.0	105
EP075(SIM): 2,6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	75.0	57.0	105
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	75.3	53.0	99.0
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	79.3	50.0	106
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	83.4	51.0	105
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	29.4	10.0	95.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4538716)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	72.7	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	81.0	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	81.1	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	85.7	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	96.6	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	92.2	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	97.1	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	90.3	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	90.7	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	95.7	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	1	µg/L	<1.0	5 µg/L	87.7	61.7	119
	205-82-3							
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	86.6	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	93.4	63.3	117
EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	89.0	59.9	118
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	90.6	61.2	117
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	96.4	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4538715)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	82.9	53.7	97.0
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	79.3	63.3	107



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) LowHigh	
Method: Compound	CAS Number	LOR	Unit	Result				
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4538715) - continued								
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	87.7	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4544103)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	75.3	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4538715)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	62.4	53.9	95.5
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	83.8	57.8	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	88.3	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4544103)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	76.9	75.0	127
EP080: BTEXN (QCLot: 4544103)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	73.8	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	78.3	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	80.1	70.0	120
EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	10 µg/L	80.5	69.0	121
	106-42-3							
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	82.2	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	74.7	70.0	120

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(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4543500)							
ES2230080-001	BH01_0.2_220822	EG005T: Arsenic	7440-38-2	50 mg/kg	99.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	100	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	101	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	101	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	97.5	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	100	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4543499)							
ES2230080-001	BH01_0.2_220822	EG035T: Mercury	7439-97-6	5 mg/kg	99.9	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4539081)							
ES2229281-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	85.8	70.0	130



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 4539081) - continued							
ES2229281-001	Anonymous	EP068: Heptachlor	76-44-8	0.5 mg/kg	82.8	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	109	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	88.5	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	75.7	70.0	130
		EP068: 4,4`-DDT	50-29-3	2 mg/kg	76.4	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4539081)							
ES2229281-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	88.8	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	84.5	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	91.1	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	91.9	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	78.6	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 4542769)							
ES2230080-001	BH01_0.2_220822	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	106	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	81.5	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 4542769)							
ES2230080-001	BH01_0.2_220822	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	96.3	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4539080)							
ES2229281-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	86.0	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	87.5	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	83.0	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	104	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	60.1	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4539080)							
ES2229281-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	101	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	107	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4539079)							
ES2229281-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	105	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	88.1	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	99.5	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4542768)							
ES2230080-001	BH01_0.2_220822	EP080: C6 - C9 Fraction	----	32.5 mg/kg	113	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4543673)							
ES2230282-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	112	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4539079)							
ES2229281-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	96.6	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	92.4	53.0	131



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4539079) - continued							
ES2229281-001	Anonymous	EP071: >C34 - C40 Fraction	----	890 mg/kg	80.2	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4542768)							
ES2230080-001	BH01_0.2_220822	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	112	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4543673)							
ES2230282-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	109	70.0	130
EP080: BTEXN (QCLot: 4542768)							
ES2230080-001	BH01_0.2_220822	EP080: Benzene	71-43-2	2.5 mg/kg	92.5	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	98.7	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	97.2	70.0	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	97.7	70.0	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	101	70.0	130
	EP080: Naphthalene	91-20-3	2.5 mg/kg	90.8	70.0	130	
EP080: BTEXN (QCLot: 4543673)							
ES2230282-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	97.7	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	97.8	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	95.2	70.0	130
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	95.4	70.0	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	94.8	70.0	130
	EP080: Naphthalene	91-20-3	2.5 mg/kg	84.4	70.0	130	
Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4542365)							
ES2230029-008	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	85.0	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	90.9	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	90.6	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	88.9	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	83.4	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	86.6	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	88.1	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4542366)							
ES2230080-014	QC300_220822	EG035F: Mercury	7439-97-6	0.01 mg/L	91.8	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 4544102)							
ES2230065-006	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	25 µg/L	90.0	70.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 4544102) - continued							
ES2230065-006	Anonymous	EP074: Trichloroethene	79-01-6	25 µg/L	94.6	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 4544102)							
ES2230065-006	Anonymous	EP074: Chlorobenzene	108-90-7	25 µg/L	97.3	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 4538716)							
ES2230029-010	Anonymous	EP075(SIM): Phenol	108-95-2	20 µg/L	32.3	20.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	20 µg/L	83.3	60.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	20 µg/L	74.9	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	20 µg/L	83.2	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	20 µg/L	43.9	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4538716)							
ES2230029-010	Anonymous	EP075(SIM): Acenaphthene	83-32-9	20 µg/L	84.0	70.0	130
		EP075(SIM): Pyrene	129-00-0	20 µg/L	94.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4538715)							
ES2230029-010	Anonymous	EP071: C10 - C14 Fraction	----	200 µg/L	86.8	70.0	130
		EP071: C15 - C28 Fraction	----	250 µg/L	108	71.0	130
		EP071: C29 - C36 Fraction	----	200 µg/L	85.3	67.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4544103)							
ES2230065-006	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	82.0	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4538715)							
ES2230029-010	Anonymous	EP071: >C10 - C16 Fraction	----	250 µg/L	99.4	70.0	130
		EP071: >C16 - C34 Fraction	----	350 µg/L	86.7	75.0	130
		EP071: >C34 - C40 Fraction	----	150 µg/L	76.7	67.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4544103)							
ES2230065-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	89.4	70.0	130
EP080: BTEXN (QCLot: 4544103)							
ES2230065-006	Anonymous	EP080: Benzene	71-43-2	25 µg/L	83.4	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	88.9	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	93.0	70.0	130
		EP080: meta- & para-Xylene	108-38-3	25 µg/L	91.6	70.0	130
			106-42-3				
		EP080: ortho-Xylene	95-47-6	25 µg/L	93.2	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	91.9	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2230080	Page	: 1 of 12
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR STEPHEN RANDALL	Telephone	: +61 2 8784 8555
Project	: 60687982/1.3	Date Samples Received	: 23-Aug-2022
Site	: TALAVERA ROAD	Issue Date	: 30-Aug-2022
Sampler	: M. TAYLOR	No. of samples received	: 17
Order number	: 60687982/1.3	No. of samples analysed	: 17

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.
- Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.

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.



Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP068S: Organochlorine Pesticide Surrogate	ES2230080-014	QC300_220822	Dibromo-DDE	21655-73-2	64.8 %	66.5-111 %	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	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	7	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	1	20	5.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Pesticides by GCMS	0	1	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)		22-Aug-2022	----	----	----	26-Aug-2022	05-Sep-2022	✔
BH01_0.2_220822,								
BH02_0.2_220822,								
BH03_0.2_220822,								
BH04_0.2_220822,								
BH05_0.2_220822,								
BH06_0.1_220822,								
QC100_220822								
BH01_0.5_220822,								
BH02_0.5_220822,								
BH03_0.5_220822,								
BH04_0.5_220822,								
BH05_0.5_220822,								
BH05_0.3_220822 - BH06_0.3_220822,								



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 - ACM/Asbestos Grab Bag (EA200)								
BH01_0.2_220822, BH02_0.2_220822, BH03_0.2_220822, BH04_0.2_220822, BH05_0.2_220822, BH06_0.1_220822,	BH01_0.5_220822, BH02_0.5_220822, BH03_0.5_220822, BH04_0.5_220822, BH05_0.5_220822, BH05_0.3_220822 - BH06_0.3_220822	22-Aug-2022	----	----	----	25-Aug-2022	18-Feb-2023	✔
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
BH01_0.2_220822, BH02_0.2_220822, BH03_0.2_220822, BH04_0.2_220822, BH05_0.2_220822, BH06_0.1_220822, QC100_220822	BH01_0.5_220822, BH02_0.5_220822, BH03_0.5_220822, BH04_0.5_220822, BH05_0.5_220822, BH05_0.3_220822 - BH06_0.3_220822,	22-Aug-2022	26-Aug-2022	18-Feb-2023	✔	29-Aug-2022	18-Feb-2023	✔
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
BH01_0.2_220822, BH02_0.2_220822, BH03_0.2_220822, BH04_0.2_220822, BH05_0.2_220822, BH06_0.1_220822, QC100_220822	BH01_0.5_220822, BH02_0.5_220822, BH03_0.5_220822, BH04_0.5_220822, BH05_0.5_220822, BH05_0.3_220822 - BH06_0.3_220822,	22-Aug-2022	26-Aug-2022	19-Sep-2022	✔	29-Aug-2022	19-Sep-2022	✔
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
BH01_0.2_220822, BH02_0.2_220822, BH03_0.2_220822, BH04_0.2_220822, BH05_0.2_220822, BH06_0.1_220822, QC100_220822	BH01_0.5_220822, BH02_0.5_220822, BH03_0.5_220822, BH04_0.5_220822, BH05_0.5_220822, BH05_0.3_220822 - BH06_0.3_220822,	22-Aug-2022	26-Aug-2022	05-Sep-2022	✔	29-Aug-2022	05-Oct-2022	✔



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)		22-Aug-2022	26-Aug-2022	05-Sep-2022	✔	29-Aug-2022	05-Oct-2022	✔
BH01_0.2_220822,	BH01_0.5_220822,							
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								
EP074D: Fumigants								
Soil Glass Jar - Unpreserved (EP074)		22-Aug-2022	26-Aug-2022	29-Aug-2022	✔	27-Aug-2022	29-Aug-2022	✔
BH01_0.2_220822,	BH01_0.5_220822,							
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								
EP074E: Halogenated Aliphatic Compounds								
Soil Glass Jar - Unpreserved (EP074)		22-Aug-2022	26-Aug-2022	29-Aug-2022	✔	27-Aug-2022	29-Aug-2022	✔
BH01_0.2_220822,	BH01_0.5_220822,							
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								
EP074F: Halogenated Aromatic Compounds								
Soil Glass Jar - Unpreserved (EP074)		22-Aug-2022	26-Aug-2022	29-Aug-2022	✔	27-Aug-2022	29-Aug-2022	✔
BH01_0.2_220822,	BH01_0.5_220822,							
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								



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	
EP074G: Trihalomethanes								
Soil Glass Jar - Unpreserved (EP074)								
BH01_0.2_220822,	BH01_0.5_220822,	22-Aug-2022	26-Aug-2022	29-Aug-2022	✔	27-Aug-2022	29-Aug-2022	✔
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH01_0.2_220822,	BH01_0.5_220822,	22-Aug-2022	26-Aug-2022	05-Sep-2022	✔	26-Aug-2022	05-Oct-2022	✔
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
BH01_0.2_220822,	BH01_0.5_220822,	22-Aug-2022	26-Aug-2022	05-Sep-2022	✔	26-Aug-2022	05-Oct-2022	✔
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								



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) TRIP BLANK		18-Aug-2022	26-Aug-2022	01-Sep-2022	✓	27-Aug-2022	01-Sep-2022	✓
Soil Glass Jar - Unpreserved (EP071) BH01_0.2_220822, BH01_0.5_220822, BH02_0.2_220822, BH02_0.5_220822, BH03_0.2_220822, BH03_0.5_220822, BH04_0.2_220822, BH04_0.5_220822, BH05_0.2_220822, BH05_0.5_220822, BH06_0.1_220822, BH05_0.3_220822 - BH06_0.3_220822, QC100_220822		22-Aug-2022	26-Aug-2022	05-Sep-2022	✓	26-Aug-2022	05-Oct-2022	✓
Soil Glass Jar - Unpreserved (EP080) BH01_0.2_220822, BH01_0.5_220822, BH02_0.2_220822, BH02_0.5_220822, BH03_0.2_220822, BH03_0.5_220822, BH04_0.2_220822, BH04_0.5_220822, BH05_0.2_220822, BH05_0.5_220822, BH06_0.1_220822, BH05_0.3_220822 - BH06_0.3_220822, QC100_220822		22-Aug-2022	26-Aug-2022	05-Sep-2022	✓	27-Aug-2022	05-Sep-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080) TRIP BLANK		18-Aug-2022	26-Aug-2022	01-Sep-2022	✓	27-Aug-2022	01-Sep-2022	✓
Soil Glass Jar - Unpreserved (EP071) BH01_0.2_220822, BH01_0.5_220822, BH02_0.2_220822, BH02_0.5_220822, BH03_0.2_220822, BH03_0.5_220822, BH04_0.2_220822, BH04_0.5_220822, BH05_0.2_220822, BH05_0.5_220822, BH06_0.1_220822, BH05_0.3_220822 - BH06_0.3_220822, QC100_220822		22-Aug-2022	26-Aug-2022	05-Sep-2022	✓	26-Aug-2022	05-Oct-2022	✓
Soil Glass Jar - Unpreserved (EP080) BH01_0.2_220822, BH01_0.5_220822, BH02_0.2_220822, BH02_0.5_220822, BH03_0.2_220822, BH03_0.5_220822, BH04_0.2_220822, BH04_0.5_220822, BH05_0.2_220822, BH05_0.5_220822, BH06_0.1_220822, BH05_0.3_220822 - BH06_0.3_220822, QC100_220822		22-Aug-2022	26-Aug-2022	05-Sep-2022	✓	27-Aug-2022	05-Sep-2022	✓



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)								
TRIP BLANK,	TRIP SPIKE,	18-Aug-2022	26-Aug-2022	01-Sep-2022	✓	27-Aug-2022	01-Sep-2022	✓
TS CONTROL								
Soil Glass Jar - Unpreserved (EP080)								
BH01_0.2_220822,	BH01_0.5_220822,	22-Aug-2022	26-Aug-2022	05-Sep-2022	✓	27-Aug-2022	05-Sep-2022	✓
BH02_0.2_220822,	BH02_0.5_220822,							
BH03_0.2_220822,	BH03_0.5_220822,							
BH04_0.2_220822,	BH04_0.5_220822,							
BH05_0.2_220822,	BH05_0.5_220822,							
BH06_0.1_220822,	BH05_0.3_220822 - BH06_0.3_220822,							
QC100_220822								

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
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F) QC300_220822	22-Aug-2022	----	----	----	26-Aug-2022	18-Feb-2023	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F) QC300_220822	22-Aug-2022	----	----	----	29-Aug-2022	19-Sep-2022	✓
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved (EP068) QC300_220822	22-Aug-2022	26-Aug-2022	29-Aug-2022	✓	29-Aug-2022	05-Oct-2022	✓
EP068B: Organophosphorus Pesticides (OP)							
Amber Glass Bottle - Unpreserved (EP068) QC300_220822	22-Aug-2022	26-Aug-2022	29-Aug-2022	✓	29-Aug-2022	05-Oct-2022	✓
EP074D: Fumigants							
Amber VOC Vial - Sulfuric Acid (EP074) QC300_220822	22-Aug-2022	29-Aug-2022	05-Sep-2022	✓	29-Aug-2022	05-Sep-2022	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074) QC300_220822	22-Aug-2022	29-Aug-2022	05-Sep-2022	✓	29-Aug-2022	05-Sep-2022	✓
EP074F: Halogenated Aromatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074) QC300_220822	22-Aug-2022	29-Aug-2022	05-Sep-2022	✓	29-Aug-2022	05-Sep-2022	✓
EP074G: Trihalomethanes							
Amber VOC Vial - Sulfuric Acid (EP074) QC300_220822	22-Aug-2022	29-Aug-2022	05-Sep-2022	✓	29-Aug-2022	05-Sep-2022	✓



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
EP075(SIM)A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075(SIM)) QC300_220822	22-Aug-2022	26-Aug-2022	29-Aug-2022	✓	29-Aug-2022	05-Oct-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) QC300_220822	22-Aug-2022	26-Aug-2022	29-Aug-2022	✓	29-Aug-2022	05-Oct-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) QC300_220822	22-Aug-2022	26-Aug-2022	29-Aug-2022	✓	29-Aug-2022	05-Oct-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080) QC300_220822	22-Aug-2022	29-Aug-2022	05-Sep-2022	✓	29-Aug-2022	05-Sep-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) QC300_220822	22-Aug-2022	26-Aug-2022	29-Aug-2022	✓	29-Aug-2022	05-Oct-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080) QC300_220822	22-Aug-2022	29-Aug-2022	05-Sep-2022	✓	29-Aug-2022	05-Sep-2022	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) QC300_220822	22-Aug-2022	29-Aug-2022	05-Sep-2022	✓	29-Aug-2022	05-Sep-2022	✓



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	4	34	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	29	13.79	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	13	15.38	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	29	6.90	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	13	7.69	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	



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)							
Dissolved Mercury by FIMS	EG035F	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	9	22.22	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	7	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	1	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	5.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	1	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂) (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 ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. 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.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).



Analytical Methods	Method	Matrix	Method Descriptions
Pesticides by GCMS	EP068	WATER	In house: Referenced to USEPA SW 846 - 8270 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 Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 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 Schedule B(3)
Volatile Organic Compounds	EP074	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 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 Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 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 Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
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 ₂ SO ₄ 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.
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM 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 purging.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2230080

Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR STEPHEN RANDALL	Contact	: Sepan Mahamad
Address	: LEVEL 21 420 GEORGE STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: Stephen.Randall@aecom.com	E-mail	: Sepan.Mahamad@ALSGlobal.com
Telephone	: 02 8934 0000	Telephone	: +61 2 8784 8555
Facsimile	: 02 8934 0001	Facsimile	: +61-2-8784 8500
Project	: 60687982/1.3	Page	: 1 of 4
Order number	: ----	Quote number	: ES2021AECOMAU0044 (EN/004/21)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: TALAVERA ROAD		
Sampler	: M. TAYLOR		

Dates

Date Samples Received	: 23-Aug-2022 16:30	Issue Date	: 24-Aug-2022
Client Requested Due Date	: 30-Aug-2022	Scheduled Reporting Date	: 30-Aug-2022

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 4.3 - Ice present
Receipt Detail	: ESKY	No. of samples received / analysed	: 17 / 17

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample QC200 was forwarded to Eurofins.**
- **Sample 012 received as BH06_0.3_220822**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

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

- No sample container / preservation non-compliance exists.

Any sample identifications that cannot be displayed entirely in the analysis summary table will be listed below.

ES2230080-012 : [22-Aug-2022] : BH05_0.3_220822 - BH06_0.3_220822

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	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EA200G Asbestos Identification in Soils -	SOIL - EP074DEFG (solids) VOC - Fumigants, Hal Aliphatics, Hal Aromatics,	SOIL - S-12 OC/OP Pesticides	SOIL - S-27 TRH/BTEXN/PAH/Phenols/8Metals
ES2230080-001	22-Aug-2022 00:00	BH01_0.2_220822	✓	✓	✓	✓	✓
ES2230080-002	22-Aug-2022 00:00	BH01_0.5_220822	✓	✓	✓	✓	✓
ES2230080-003	22-Aug-2022 00:00	BH02_0.2_220822	✓	✓	✓	✓	✓
ES2230080-004	22-Aug-2022 00:00	BH02_0.5_220822	✓	✓	✓	✓	✓
ES2230080-005	22-Aug-2022 00:00	BH03_0.2_220822	✓	✓	✓	✓	✓
ES2230080-006	22-Aug-2022 00:00	BH03_0.5_220822	✓	✓	✓	✓	✓
ES2230080-007	22-Aug-2022 00:00	BH04_0.2_220822	✓	✓	✓	✓	✓
ES2230080-008	22-Aug-2022 00:00	BH04_0.5_220822	✓	✓	✓	✓	✓
ES2230080-009	22-Aug-2022 00:00	BH05_0.2_220822	✓	✓	✓	✓	✓
ES2230080-010	22-Aug-2022 00:00	BH05_0.5_220822	✓	✓	✓	✓	✓
ES2230080-011	22-Aug-2022 00:00	BH06_0.1_220822	✓	✓	✓	✓	✓
ES2230080-012	22-Aug-2022 00:00	BH05_0.3_220822 BH0...	✓	✓	✓	✓	✓
ES2230080-013	22-Aug-2022 00:00	QC100_220822	✓		✓	✓	✓

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EP080 BTEXN	SOIL - S-18 (NO MOIST) TRH(C6-C9)/BTEXN with No Moisture for TBs
ES2230080-015	18-Aug-2022 00:00	TRIP BLANK		✓
ES2230080-016	18-Aug-2022 00:00	TRIP SPIKE	✓	
ES2230080-017	18-Aug-2022 00:00	TS CONTROL	✓	



Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - W-12 OC/OP Pesticides	WATER - W-27 TRH/BTEXN/PAH/Phenols/8 Metals
ES2230080-014	22-Aug-2022 00:00	QC300_220822	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP074DEFG VOC - Fumigants, Hal Aliphatics, Hal Aromatics,
ES2230080-014	22-Aug-2022 00:00	QC300_220822	✓

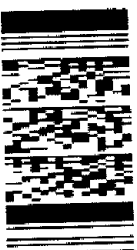
Proactive Holding Time Report

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

SAMPLES RECEIVED WITHOUT COC

Environmental Division
Sydney
Work Order Reference

ES2230080



Telephone : +61-2-8784 8555

CLIENT: AECOM	CARRIER: CLEM
PROJECT / QUOTE: 60687482	CONNOTE #:
CONTACT NAME: M TAYLOR	AMB #:
CONTACT NUMBER:	# OF ESKIES: 1
SAMPLER NAME: MT	SECURITY SEAL: Y N <u>(N/A)</u>
SAMPLER NUMBER:	ESKY NUMBERS:
SAMPLES RECEIVED BY: Jack	# OF SAMPLES:
DATE/TIME RECEIVED: 13/07/11 1630	TEMPERATURE: 4.3°C ice.

SAMPLE DETAILS			ADDITIONAL INFORMATION / COMMENTS:	
LAB ID	SAMPLE ID	DATE	MATRIX	NUMBER OF CONTAINERS
1	B402-0.5-220822	22/08/12	S	
2	B406-0.5-220822	22/08/12	S	
3	GC300-220822	22/08/12	W	
4	B401-0.5-220822	22/08/12	S	
5	GC100-0.2-220822	22/08/12	S	
INITIALS				

CORRESPONDENCE (DATE, INITIALS - DETAILS OF CORRESPONDENCE):

ESky in mobile codetron

OTHER INFORMATION:

- ☐ MICRO
☐ BIOSECURITY
☐ BROKEN CONTAINERS
☒ COC EMAILED
☐ ALS COMPASS

* CC ENMAILED *

60687982

M TAYLOR

AECOM

23.8.22

COC Page 1 of 1

CERTIFICATE OF ANALYSIS

Work Order : **ES2231115**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **MR STEPHEN RANDALL**
Address : **LEVEL 21 420 GEORGE STREET**
SYDNEY NSW, AUSTRALIA 2000
Telephone : **02 8934 0000**
Project : **60687982/1.3**
Order number : **60687982/1.3**
C-O-C number : **----**
Sampler : **Matthew Taylor**
Site : **TALavera ROAD**
Quote number : **EN/004/21**
No. of samples received : **5**
No. of samples analysed : **5**

Page : 1 of 4
Laboratory : Environmental Division Sydney
Contact : Sepan Mahamad
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61 2 8784 8555
Date Samples Received : 31-Aug-2022 14:03
Date Analysis Commenced : 01-Sep-2022
Issue Date : 05-Sep-2022 12:51



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, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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>
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

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

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

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

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

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

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



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				BH02_0.2_220822	BH03_0.2_220822	BH04_0.2_220822	BH05_0.2_220822	BH06_0.1_220822
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2231115-001	ES2231115-002	ES2231115-003	ES2231115-004	ES2231115-005
				Result	Result	Result	Result	Result
EN33: TCLP Leach - Inorganics/Non-Volatile Organics (Glass Vessel)								
Initial pH	----	0.1	pH Unit	9.9	9.8	9.7	9.7	9.8
After HCl pH	----	0.1	pH Unit	3.0	2.9	2.6	2.0	1.8
Extraction Fluid Number	----	1	-	1	1	1	1	1
Final pH	----	0.1	pH Unit	5.8	5.6	5.3	5.2	5.2



Analytical Results

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

Sample ID

				BH02_0.2_220822	BH03_0.2_220822	BH04_0.2_220822	BH05_0.2_220822	BH06_0.1_220822
Sampling date / time				22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00	22-Aug-2022 00:00
Compound	CAS Number	LOR	Unit	ES2231115-001	ES2231115-002	ES2231115-003	ES2231115-004	ES2231115-005
				Result	Result	Result	Result	Result
EG005(ED093)C: Leachable Metals by ICPAES								
Nickel	7440-02-0	0.1	mg/L	0.1	0.2	0.6	0.2	0.7

QUALITY CONTROL REPORT

Work Order	: ES2231115	Page	: 1 of 3
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR STEPHEN RANDALL	Contact	: Sepan Mahamad
Address	: LEVEL 21 420 GEORGE STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 8934 0000	Telephone	: +61 2 8784 8555
Project	: 60687982/1.3	Date Samples Received	: 31-Aug-2022
Order number	: 60687982/1.3	Date Analysis Commenced	: 01-Sep-2022
C-O-C number	: ----	Issue Date	: 05-Sep-2022
Sampler	: Matthew Taylor		
Site	: TALAVERA ROAD		
Quote number	: EN/004/21		
No. of samples received	: 5		
No. of samples analysed	: 5		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. 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>
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



General Comments

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

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

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

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: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)C: Leachable Metals by ICPAES (QC Lot: 4558901)									
ES2230950-001	Anonymous	EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	0.0	No Limit
ES2231115-003	BH04_0.2_220822	EG005C: Nickel	7440-02-0	0.1	mg/L	0.6	0.6	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (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 Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EN33: TCLP Leach - Inorganics/Non-Volatile Organics (Glass Vessel) (QCLot: 4553767)								
EN33a-G: Initial pH	----	0.1	pH Unit	1.0	----	----	----	----
EN33a-G: After HCl pH	----	0.1	pH Unit	1.0	----	----	----	----
EN33a-G: Final pH	----	0.1	pH Unit	1.0	----	----	----	----

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: <i>Compound</i>	CAS Number	LOR	Unit	Result				
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 4558901)								
EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	0.1 mg/L	108	83.0	115

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: WATER				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number			Low	High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 4558901)							
ES2230950-002	Anonymous	EG005C: Nickel	7440-02-0	1 mg/L	106	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2231115	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR STEPHEN RANDALL	Telephone	: +61 2 8784 8555
Project	: 60687982/1.3	Date Samples Received	: 31-Aug-2022
Site	: TALAVERA ROAD	Issue Date	: 05-Sep-2022
Sampler	: Matthew Taylor	No. of samples received	: 5
Order number	: 60687982/1.3	No. of samples analysed	: 5

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EN33: TCLP Leach - Inorganics/Non-Volatile Organics (Glass Vessel)							
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN33a-G)							
BH02_0.2_220822, BH03_0.2_220822, BH04_0.2_220822, BH05_0.2_220822, BH06_0.1_220822	22-Aug-2022	01-Sep-2022	18-Feb-2023	✔	----	----	----

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
EG005(ED093)C: Leachable Metals by ICPAES							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG005C)							
BH02_0.2_220822, BH03_0.2_220822, BH04_0.2_220822, BH05_0.2_220822, BH06_0.1_220822	01-Sep-2022	05-Sep-2022	28-Feb-2023	✔	05-Sep-2022	28-Feb-2023	✔



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	
Method Blanks (MB)							
TCLP for Non & Semivolatile Analytes - Glass Leaching Vessel	EN33a-G	1	11	9.09	9.09	✔	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)							
Leachable Metals by ICPAES	EG005C	2	9	22.22	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Leachable Metals by ICPAES	EG005C	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Leachable Metals by ICPAES	EG005C	1	9	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Leachable Metals by ICPAES	EG005C	1	9	11.11	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
Leachable Metals by ICPAES	EG005C	SOIL	In house: referenced to APHA 3120; USEPA SW 846 - 6010: The ICPAES technique ionises leachate sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM Schedule B(3).

Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals in TCLP Leachate	EN25C	SOIL	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 Schedule B(3)
TCLP for Non & Semivolatile Analytes - Glass Leaching Vessel	EN33a-G	SOIL	In house QWI-EN/33 referenced to USEPA SW846-1311: The TCLP procedure is designed to determine the mobility of both organic and inorganic analytes present in wastes. The standard TCLP leach is for non-volatile and Semivolatile test parameters.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2231115

Client : AECOM AUSTRALIA PTY LTD Contact : MR STEPHEN RANDALL Address : LEVEL 21 420 GEORGE STREET SYDNEY NSW, AUSTRALIA 2000 E-mail : Stephen.Randall@aecom.com Telephone : 02 8934 0000 Facsimile : 02 8934 0001 Project : 60687982/1.3 Order number : 60687982/1.3 C-O-C number : ---- Site : TALAVERA ROAD Sampler : Matthew Taylor	Laboratory : Environmental Division Sydney Contact : Sepan Mahamad Address : 277-289 Woodpark Road Smithfield NSW Australia 2164 E-mail : Sepan.Mahamad@ALSGlobal.com Telephone : +61 2 8784 8555 Facsimile : +61-2-8784 8500 Page : 1 of 2 Quote number : ES2021AECOMAU0044 (EN/004/21) QC Level : NEPM 2013 B3 & ALS QC Standard
---	---

Dates

Date Samples Received : 31-Aug-2022 14:03	Issue Date : 31-Aug-2022
Client Requested Due : 05-Sep-2022	Scheduled Reporting Date : 05-Sep-2022
Date	

Delivery Details

Mode of Delivery : Samples On Hand	Security Seal : Not Available
No. of coolers/boxes : ----	Temperature : 4.1°C
Receipt Detail : ESKY	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
- **This is rebatch of ES2230080**
- **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 laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

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

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

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

Laboratory sample ID	Sampling date / time	Sample ID	SOIL-Extraction Leachate	SOIL-Extraction TCLP Leachate
ES2231115-001	22-Aug-2022 00:00	BH02_0.2_220822	✓	✓
ES2231115-002	22-Aug-2022 00:00	BH03_0.2_220822	✓	✓
ES2231115-003	22-Aug-2022 00:00	BH04_0.2_220822	✓	✓
ES2231115-004	22-Aug-2022 00:00	BH05_0.2_220822	✓	✓
ES2231115-005	22-Aug-2022 00:00	BH06_0.1_220822	✓	✓

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

Email AP_CustomerService.ANZ@aecom.com

[illegible][illegible]

Ramsen Khoshaba

31/8/2022
2:03 PM
RKH

From: Sepan Mahamad
Sent: Wednesday, 31 August 2022 2:03 PM
To: rebatches.sydney; Nanthini Coilparampli; Wisam Marassa
Subject: Rebatch AECOMAU TCLP Ni ES2230080 - 3 day TAT

Importance: High

Hi Team,

Sa27-a28
#3,5,7,9,11

Can you please organise this rebatch?

Hi Wisam and Nan,

Can you please confirm turnaround - due Monday 05/09?

Kind regards,



right solutions.
right partner.

Sep Mahamad
Client Services Coordinator, Environmental
Sydney, NSW

O : +61 2 8784 8555
D : +61 2 8784 8504

Sepan.Mahamad@alsglobal.com

277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com



TAT

Environmental Division
Sydney
Work Order Reference
ES2231115



Telephone : + 61-2-8784 8555

From: Randall, Stephen <stephen.randall@aeecom.com>
Sent: Wednesday, 31 August 2022 1:37 PM
To: Sepan Mahamad <Sepan.Mahamad@alsglobal.com>
Cc: Elismen, Brad <Brad.Elismen@aeecom.com>
Subject: [EXTERNAL] - ALS Workorder : ES2230080
Importance: High

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

Hi Sepan,

Could I please request TCLP analysis for nickel on the following samples in this workorder:

1 BH02_0.2_220822
2 BH03_0.2_220822
3 BH04_0.2_220822
4 BH05_0.2_220822
5 BH06_0.1_220822

If you have any questions please let me know. Can you please advise when I will get the results?

Kind regards

Steve

Stephen Randall BENVSC(Hons)

Principal Environmental Scientist, ANZ NAC
M +61413074243
stephen.randall@aeecom.com

AECOM
aeecom.com

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Imagine it. Delivered.

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*I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours