



Wathaurong Aboriginal Cooperative

Limited

43 The Boulevard, Norlane, VIC 3214

Environmental Site Assessment

September 2023



22.09.2023

Wathaurong Aboriginal
Cooperative Limited

43 The Boulevard, Norlane, VIC 3214

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Disclaimer

This report is compiled by SCAADA Environmental, ABN – 30 624 289 229 & ACN – 624 289 229. The document is prepared for Wathaurong Aboriginal Cooperative Limited as per information supplied to SCAADA Environmental on the 19th of September 2023. The document is current at this date and specific to instructions provided on this date. Any variations from these original instructions should not proceed without further consultation with SCAADA Environmental. Any variations from this course of conduct will negate SCAADA Environmental from any liability in respect of works conducted. The contents of this document remain the ownership of the author and the client.

The client acknowledges that the assessment only covered readily accessible areas of the site, being areas that could be easily and safely inspected without injury to any person or property. The assessment did not include areas which were inaccessible, not readily accessible and unsafe to access or obstructed at the time of inspection.

Client Information

SCAADA Environmental prides itself on providing its clients with complete privacy in respect of works requested and results of analysis. All testing and procedures are undertaken as per NATA specifications and EPA Victoria guidelines.

This report has been reviewed and issued to Wathaurong Aboriginal Cooperative Limited.

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Distribution

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Executive Summary

SCAADA Environmental Pty Ltd (SCAADA Environmental) have been engaged by the Wathaurong Aboriginal Cooperative Limited to complete an Environmental Site Assessment (ESA) as part of the planning process for a carpark development located at 43 The Boulevard, Norlane, VIC 3214 (the 'site'). Soil sampling was conducted on the 6th and 8th of September 2023. Following the completion of the ESA, SCAADA Environmental have made the following conclusions and recommendations:

Following the completion of the soil assessment, SCAADA Environmental have made the following conclusions and recommendations:

- SCAADA Environmental attended site on the 6th and 8th of September 2023 and advanced sixteen (16) boreholes, from which forty-seven (47) soil samples were collected. Thirty (30) of which were selected for laboratory analysis.
- Based on observation made during soil sample collection, there are multiple soil domains present. These have been briefly summarised below:
 - Domain 1: **FILL:** SILT, Brown (Surface domain), Inert debris, Asbestos-containing debris
 - Domain 2: **FILL:** SILTY CLAY, Brown
 - Domain 3: **FILL:** CLAY, Grey
 - Domain 4: **FILL:** SANDS, Black and red
 - Domain 5: **FILL:** SUSPECTED LANDFILL, Rubbish, Asbestos-containing debris Mottled clays and Black stained clays with hydrocarbon like odour
 - Domain 6: SANDY CLAY, Yellow
 - Domain 7: **NATURAL:** CLAY, Yellow

Soil Hazard Waste Categorisations

Domain 1

- The reported analytical concentrations for the following samples and analytes exceeded the upper threshold limit for 'Category B' material:
 - Copper (BH10_0.4)
 - Lead (BH05_1.0 & BH10_0.4)
- The reported analytical concentrations for copper and lead exceeded the upper threshold limit for 'Category D' material in sample BH10_1.0.
- Sample BH11_0.4 reported a pH value below 4, resulting in the material being a non-corrosive acids.
 - This pH may indicate the presence of Potential Acid Sulfate Soil, further sampling and analysis would be required to assess the soil.
- Reported analytical results for arsenic, cadmium, copper, mercury, nickel, and zinc exceeded the upper threshold limit for 'Fill Material' in multiple samples.
- All other analyte results for this domain were below the 'Fill Material' upper limit.
- Non-friable asbestos-containing material was observed in multiple positions throughout the assessment area within this domain.
 - The method used for the investigation is limited with regards to asbestos-containing debris due to the limited surface area being investigated for each borehole.

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- The debris identified in BH16 was very small diameter, estimated to be 10x5x2mm by Eurofins Scientific. Due to the materials size and condition the material was partially pulverisable under hand pressure. It is unclear as to whether the material was in this condition prior to disturbance or if the auger damaged the asbestos-containing cement product while boring.
- To summarise the above conclusions Domain 1 has been given a preliminary categorisation of 'Category A with asbestos'.

Domain 2

- Sample BH06_0.9 reported concentrations of arsenic, copper, nickel, and zinc which exceeded the 'Fill Material' upper limit.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 2 has been given a preliminary categorisation of 'Category D'.

Domain 3

- All reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 3 has been given a preliminary categorisation of 'Fill Material'.

Domain 4

- All reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 3 has been given a preliminary categorisation of 'Fill Material'.

Domain 5

- The reported analytical concentration for lead in sample BH10_4.9 exceeded the upper threshold limit for 'Category D' material.
- Reported analytical results for arsenic, cadmium, copper, mercury, nickel, zinc, and C10-C36 Fraction (Sum) exceeded the upper threshold limit for 'Fill Material' in multiple samples.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 5 has been given a preliminary categorisation of 'Category C'.

Domain 6

- Domain 6 was not sampled as part of this assessment due to being located below the anticipated depth required for excavation as part of the car park.

Domain 7

- The reported concentrations of arsenic exceeded the 'Fill Material' upper limit in samples BH01_2.7 and BH04_2.3.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 7 has been given a preliminary categorisation of 'Category D'.

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Environmental Values

Human Health Investigation Levels

- The reported lead concentrations for soil samples BH05_1.0, BH10_0.4, BH10_1.0 and BH10_4.9 were above the adopted HIL D criteria.
- A statistical assessment of the lead results was completed using ProUCL 5.2 software. Only samples from Domain 1, were used for this assessment. The statistical output (2,549 mg/kg) is included within Appendix F and determine the results to still exceed the adopted HIL D criteria.
- All other reported analytical results were below the adopted HIL D assessment criteria.

Health Screening Levels

- All reported analytical results were below the adopted HSL D assessment criteria.

Ecological Investigation Levels

- Current zoning for Cowies Creek identifies a portion of the water body that runs on the opposite side of Morgan St as being within a Public Conservation and Resource Zone. Offsite migration of identified contamination into the applicable portion of Cowies Creek has not been assessed as part of this ESA.
- The reported arsenic concentration for soil sample BH04_0.3 was above the adopted EIL Commercial/Industrial criteria.
- The reported chromium (III+VI) concentration for soil sample BH05_1.0 was above the adopted EIL Commercial/Industrial criteria for chromium III.
 - Additional analysis of speciated chromium would be required to assess whether the EIL criteria for chromium III has been exceeded.
- The reported copper concentrations for soil samples BH05_1.0, BH10_0.4 and BH10_1.0 were above the adopted EIL Commercial/Industrial criteria.
- The reported nickel concentration for soil sample BH10_0.4 was above the adopted EIL Commercial/Industrial criteria.
- The reported zinc concentrations for soil samples BH09_5.4, BH10_0.4 and BH10_1.0 were above the adopted EIL Commercial/Industrial criteria.
 - It should be noted that while the zinc concentration exceeded the adopted assessment criteria, the EIL criteria only apply to the top 2mBGL. As such this finding is not currently an exceedance or area of concern.
- Statistical assessments of the arsenic, copper, nickel and zinc results was completed using ProUCL 5.2 software. Only samples from Domain 1, were used for this assessment. The statistical outputs (63.44 mg/kg, 16,419 mg/kg, 246 mg/kg and 5,295 respectively) are included within Appendix F.
 - The statistical outputs for arsenic and nickel are below the adopted EIL Commercial/Industrial criteria.
 - The statistical outputs for copper and zinc still exceed the adopted EIL Commercial/Industrial criteria.
 - In summary soil concentrations of zinc across the entire investigation area, calculated by 95% UCL average, is below the adopted ecological health criteria which does not indicate impacts to this environmental value across the entire site.

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- However, the exceedances detected for arsenic (BH04) and nickel (BH10) may indicate that there is a risk to ecological health in these particular locations and further investigation of the detected exceedances may be warranted.
- All other reported analytical results were below the adopted EIL Commercial/Industrial assessment criteria.

Ecological Screening Levels

- All reported analytical results were below the adopted ESL Commercial/Industrial assessment criteria.

TRH Management Limits

- All reported analytical results were below the adopted TRH Management Limits assessment criteria.

Aesthetics

- Soil that impacts aesthetic values was encountered on site during the advancement of soil bores as part of this assessment. SCAADA Environmental believes it unlikely that these impacts will be realised while soil remains undisturbed and maintains a vegetative cover to reduce disturbance of the topsoil.

Buildings and Structures

- The reported pH values and associated soil descriptors have been compared with Table 7 of this report (Section 6.2.1) in order to assess the potential corrosivity to buildings and structures. Based on the reported pH values and relevant visually observed soil types on site it is suspected the Potential worst case corrosivity exposure classification of the site is Severe for Soil Condition B.
- Further investigation would be required to assess the sulphates in soil and sulphates and chlorides in the groundwater across the site, which may result in a different exposure classification.

Based on the above conclusions, SCAADA Environmental provides the following recommendations:

Soil Waste Hazard Categorisation

- Current data is insufficient to categorise the entirety of any domain across the full extent of the site. Should disposal of soil offsite be required, further sampling and laboratory analysis will be required to meet the requirements of Industrial Waste Resource Guidelines (IWRG702), *Soil Sampling* and EPA Publication 1828.2.
- Pending further sampling and analysis results, consideration should be given to the potential use of delineation and statistical analysis in an effort to reduce the categorisation of all/sections of soil requiring offsite disposal.

Asbestos

- Due to the limitations of the sampling methodology, the current extent/nature of the asbestos contamination throughout the site is unknown. SCAADA Environmental recommends a further site investigation into the extent and nature (Friable/non-friable) asbestos contamination throughout the site prior to development works commencing.

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- Findings of severely damaged asbestos-containing cement product in BH16 should be specifically evaluated as part of the subsequent investigation to determine if the sampled material was a result of the advancement of the borehole or if the debris was in that condition prior to disturbance.
- SCAADA Environmental also advises an asbestos management plan (AMP) be developed for the site to inform management options with regards to asbestos until development works commence. Pending the development of an AMP for the site all future soil disturbance activities should be done under asbestos conditions with an licensed asbestos removal contractor in line with relevant legislative, regulatory and WorkSafe Victoria requirements.

Potential Acid Sulfate Soils

- The pH result (3.8) observed in BH11_0.4 has raised concerns around the presence of potential acid sulfate soils and should be further investigated. The findings of this investigation will impact off-site disposal and long-term management of the site if soil is classified as Actual Acid Sulfate Soil.

Human Health Investigation Levels

- SCAADA Environmental provides the following recommendations for consideration with regards to the Human Health Investigation Level Exceedances (HIL D) – Lead:
 - If the soil is to remain in-situ onsite, a further site-specific risk assessment of lead with regards to potential human health impacts would be required for both the current and proposed land use.
 - Removal and disposal of soil in this position to a lawful place.

Ecological Investigation Levels

- SCAADA Environmental recommends further investigation into the potential for offsite migration of identified contamination into the 99% species protection segment of Cowies Creek.
- SCAADA Environmental provides the following recommendations for consideration with regards to the Ecological Investigation Level Exceedances (Commercial/Industrial) - chromium:
 - If the soil is to remain in-situ onsite:
 - Undertake a speciated chromium analysis to obtain the chromium III concentration as opposed the chromium III and VI concentration of the soil in question. This will allow accurate determination of if there is an exceedance against the chromium III criteria.
 - A further site-specific risk assessment of chromium III with regards to potential ecological impacts would be required for both the current and proposed land use.
 - Removal and disposal of soil in this position to a lawful place
- SCAADA Environmental provides the following recommendations for consideration with regards to the Ecological Investigation Level Exceedances (Commercial/Industrial) – Copper & Zinc:
 - If the soil is to remain in-situ onsite, a further site-specific risk assessment, with regards to potential ecological impacts would be required for both the current and proposed land use.
 - Removal and disposal of soil in this position to a lawful place.
- SCAADA Environmental provides the following recommendations for consideration with regards to the Ecological Investigation Level Exceedances (Commercial/Industrial) – Arsenic and Nickel:
 - Removal and disposal of soil in this position to a lawful place.

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- Should the soil remain in-situ onsite consideration should be given to a further investigation into the ecological impacts posed by the arsenic and nickel exceedances in their identified positions.

Buildings and Structures

- Consideration should be given to further investigation of the following:
 - Potential corrosivity exposure classification of the site. Current data is insufficient to confidently determine the exposure classification. Further investigation would be required to assess the sulphates in soil and sulphates and chlorides in the groundwater across the site.

General

- While landfill gas was not assessed as part of this investigation, SCAADA Environmental recommends a landfill gas risk assessment be undertaken prior to commencing proposed development works.
- While groundwater was not assessed as part of this investigation, the discovery of the landfill cell aligns with recommendations made within the SCAADA Environmental PSI. This recommendation was for consideration to be given to the installation of groundwater monitoring wells and a groundwater monitoring program for the site to assess potential on-site and off-site impacts.

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1 INTRODUCTION

SCAADA Environmental have been engaged by Wathaurong Aboriginal Cooperative Limited to complete an Environmental Site Assessment (ESA) as part of the proposed development works to turn the site into a carpark at 43 The Boulevard, Norlane, VIC 3214 (the 'site'). SCAADA Environmental understands that the assessment works are required so as to gain further knowledge on the contamination status of the soil at the site, assess compliance with relevant National Environment Protection Measure criteria and provide an indication to the potential Waste Soil Hazard Category of soil material to allow offsite disposal.

1.1. OBJECTIVE

The objectives of the soil assessment include the following:

- Gain knowledge on the contamination status of soil throughout the site.
- Assess the soil contamination against the relevant Health Screening Level (HSL) within the National Environmental Protection Measure (NEPM).
- Assess the specific areas containing potential contamination identified in the Preliminary Site Investigation (PSI) (SCAADA 2023).
- Provide an indication to the potential Waste Soil Hazard Categorisation of the soil, that will allow for offsite disposal.

1.2. SCOPE OF WORKS

In order to meet the project objectives, the following scope of works was completed:

- Advancement of soil bores across the development site so as to allow the collection of soil samples for laboratory analysis.
- Interpretation of reported analytical results.
- Formulation of this report detailing the findings of the ESA and subsequent recommendations.

1.3. KEY SITE INFORMATION

A summary of available key site information is provided below in Table 1.

Table 1: Key Site Information

Item	Detail
Site Address	43 The Boulevard, Norlane, VIC 3214
Soil Disturbance Area	5,951 m ²
Current Use	Public Park and Recreation/Vehicle Access
Former Uses	Quarry and landfill.
Zoning	Public Park and Recreation Zone (PPRZ)

2 SITE INFORMATION

2.1 PRELIMINARY SITE INVESTIGATION

The findings of the preliminary site investigation (PSI) conducted by SCAADA Environmental concluded that it is likely that potentially contaminating activities have occurred on site historically. The onsite potentially contaminating land uses, activities, and sources listed within the PSI included:

- Mining/extractive industry (Quarry)
- Landfill

The potentially contaminating activities identified offsite included:

- Vehicle operations
- Asphalt/bitumen bulk storage
- Fuel storage facilities

3 TECHNICAL FRAMEWORK

This ESA was undertaken in general accordance with the following legislation and guidelines:

- Australian Standard 4482.1, *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile compounds*, 2005;
- Australian Standard 4482.2, *Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances*, 1999;
- Australian Standard 4439.2, *Wastes, sediments and contaminated soils, Part 2: Preparation of leachates – Zero headspace procedure*, 2019;
- Australian Standard 4439.3, *Wastes, sediments and contaminated soils, Part 3: Preparation of leachates – Bottle leaching procedure*, 2019;
- NEPC (2013) *National Environment protection (Assessment of Site Contamination) Measure 1999*, as amended in 2013, National Environment Protection Council;
- Victorian EPA, *Environmental Reference Standard*, May 2021;
- Victorian EPA, Industrial Waste Resource Guidelines (IWRG702), *Soil Sampling*, June 2009; and
- Victorian EPA, *1828.2: Waste Disposal Categories – Characteristics and Thresholds*, March 2021.

4 FIELD WORKS

Soil sampling works were conducted at the site to assess the site contamination status as guided by the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (2013), also known as the NEPM, and the Australian Standard AS 4482.1 *Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile Compounds* (Standards Australia AS4482.1-2005).

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4.1 SAMPLE DENSITY

Soil sampling was conducted across the site area so as to gain an understanding of the potential contamination status of the site. Australian Standard AS 4482.1 currently lists a total of 15 grid-based sampling locations for a 6,000 m² site in order to identify circular contamination hot spots (diameter of 23.6 m) with 95% confidence.

As the development site covers approximately 5,951 m², SCAADA Environmental advanced sixteen (16) soil bores across the development site and submitted forty-seven (47) soil samples, thirty (30) of which were selected for laboratory analysis. Soil bores were advanced to depths of up to 6.2 mBGL, with soil samples being collected at depths between 0.1 mBGL and 5.5 mBGL.

Ten (10) of the soil bores were advanced using a drill rig, while the remain six (6) were manually advanced.

4.2 SOIL SAMPLING METHODOLOGY

The soil sampling methodology followed by SCAADA Environmental during the environmental assessment is summarised in Table 2.

Soil assessment works were undertaken in general accordance with the guidelines listed in section 2.

Table 2: Summary of Soil Sampling Methodology

Activity	Details / Comments
Date of field activities	6 th and 8 th of September 2023
Soil sample collection	Soil samples were collected using manual (hand auger) or mechanical (solid auger) methods from depths ranging from 0.1 mBGL to 5.5 mBGL. Dedicated disposable gloves and laboratory supplied sample containers were used for the collection of samples.
Decontamination of equipment	Decontamination was undertaken on sampling equipment between bores using Decon 90 and de-ionised water. New disposable nitrile gloves were used for the collection of each sample.
Soil logging	The sub-surface conditions were logged by an experienced Environmental Consultant. Soil bore logs are included in Appendix D.
Sample handling and transportation	Following collection, samples were immediately placed into laboratory supplied glass jars with Teflon lined seals to avoid volatile loss. Samples were placed into an esky with ice following collection before being delivered to NATA accredited laboratories under chain of custody documentation.
Sample preservation	Samples were stored on ice in an esky while on site and in transit to the laboratory.

Activity	Details / Comments
Field QC	Collection of field duplicate and field triplicate samples was undertaken at a rate of one per twenty samples being analysed.
Laboratory	Samples were sent to NATA accredited Eurofins (primary laboratory) and ALS Environmental Laboratories Pty Ltd (ALS) (secondary laboratory) for analysis.
Sample analysis	<p>Soil samples were analysed for a selection of the following:</p> <ul style="list-style-type: none"> • Inorganics (Conductivity, Cation Exchange Capacity, Cyanide, Fluoride, Moisture Content and pH); • Metals; • Benzene, Toluene, Ethylbenzene and Xylene (BTEX); • Total Recoverable Hydrocarbons/Total Petroleum Hydrocarbons (TRH/TPH); • Poly Aromatic Hydrocarbons (PAHs); • Polychlorinated Biphenyls (PCBs); • Phenols; • Clay (%); • Iron (%); • Chlorinated Hydrocarbons (CHC); • Halogenated Benzenes; • Halogenated Hydrocarbons; • Herbicides; • Monocyclic Aromatic Hydrocarbons (MAH); • Organochlorine Pesticides (OCP); • Organophosphorus Pesticides (OPP); • Total Organic Carbon (%); • Pesticides; and • Solvents.

4.3 FIELD OBSERVATIONS

4.3.1 Surface Vegetation

Surface vegetation across the site appeared to be in relatively good condition with no obvious signs of distress.

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4.3.2 Water Runoff and Surface Flow Direction

There are no visible surface water bodies located onsite. The nearest water body offsite is Cowies Creek, located approximately 20m southwest of the site. It is assumed surface water onsite would drain to Cowies Creek via infiltration into the soil profile in uncovered and unsealed areas.

Surface water flow direction was unable to be determined during site attendances due to the relatively dry conditions.

4.3.3 Topography

The site has been observed to be generally flat in height with minimal visually distinct ascensions/descensions present across the site. A general descent to the west (Cowies Creek) was evident in the overall topography of the site.

4.3.4 Historical Infrastructure

SCAADA Environmental found no visual indication of any historical infrastructure such as buried tanks or located on site.

4.3.5 Neighbouring Properties

The current uses of the surrounding properties have been detailed in Table 3 below:

Table 3: Neighbouring properties.

Direction	Address	Current Use
North	-	Morgan Street and Open Allotment
East	21-31 The Boulevard, Norlane	Industrial Shed (Multiple Units and Businesses)
South	21 Birdwood Avenue, Corio and 62 Morgan Street, Norlane	VicRoads Depot and Wathaurong Aboriginal Co-Operative
West	-	Morgan Street and Various Industrial Sites

Current zoning for Cowies Creek identifies a portion of the water body that runs on the opposite side of Morgan St as being within a Public Conservation and Resource Zone.

4.3.6 Site-Specific Geology

The site-specific geology is summarised below and is based on the soil investigation conducted at the site. Soil bore logs describing the encountered soil are provided in Appendix D.

The surface domain, consisting of brown silty soils, was encountered across the site with varying depths. This soil was underlain by a variety of domains, the underlying soils do not appear to be consistent in their layering. Underlying soils consisted of a variety of types including, black sands, red sands, concrete/road base material, and white clay. These materials are above what is suspected to be the landfill cell.

Suspected landfill cell domains have only been visually described where visually significant changes were encountered. The landfill cell consisted of a variety of materials/soils that frequently changed, generally most of the soil encountered within these layers was a mottled clay. Waste debris was made from a variety of materials and, on occasion, was unidentifiable due to its size and condition. Some black staining with strong hydrocarbon like odour was present at depth in the suspected

landfill material. The black stained odorous soil where encountered was typically followed by a hard surface that was impenetrable using the push tube method.

What is assumed to be the natural soil layers were encountered on three occasions due to the extensive filling that has occurred over the site. The natural layers consisted of yellow clays and sandy clays.

Table 4 below lists some of the visually distinct domains with a general description and the relevant photo number as included within Appendix E. The soil specific descriptions can be found on the bore logs attached in Appendix D.

Table 4: Domains and applicable photo numbers within Appendix E.

Domain Number	General Layer Description	Photo Number
1	FILL: SILT, Brown (Surface domain), Inert debris, Asbestos-containing debris	1
2	FILL: SILTY CLAY, Brown	-
-	FILL: Road Base/Concrete	2
3	FILL: CLAY, Grey	
4	FILL: SANDS, Black and red	3 & 4
5	FILL: SUSPECTED LANDFILL, Rubbish, Asbestos-containing debris Mottled clays and Black stained clays with hydrocarbon like odour	5, 6, 7 & 8
6	SANDY CLAY, Yellow	9
7	NATURAL: CLAY, Yellow	10

Note: The domains listed are a generalisation and not found across the entire site.

4.3.7 Asbestos

Extraneous material, including, metal, glass, concrete, gravels, organic material, paper, slag, charcoal, malthoid, fibro-cement, fibrous materials, ropes, woven textiles, rubber, terracotta, plastics, timber, bone, bricks, ceramic tiles and unidentifiable materials.

Suspected asbestos containing materials were encountered at various depths, and in multiple boreholes. BH10 and BH09 were advanced the first meter below ground level (mBGL) using an auger attachment with a diameter of approximately 150 mm. Due to the significant quantity of suspected-asbestos encountered using this approach all further boring (BH01-BH10) was undertaken using a push tube method with a diameter of approximately 90 mm.

Boreholes 11-16 were bored using a hand auger, with a diameter of approximately 100mm, this method resulted in further suspected asbestos-containing material finds.

A summary of the suspected asbestos-containing findings is presented in Table 5 below.

Table 5: Suspected asbestos-containing material finds.

Borehole	Depth (mBGL)	Material Description	Quantity (Pieces)	Laboratory Analysis	Friability	Asbestos Presence/Absence	Photo
BH05	2.0	Black malleable	Multiple	Yes	-	No asbestos detected	11

Borehole	Depth (mBGL)	Material Description	Quantity (Pieces)	Laboratory Analysis	Friability	Asbestos Presence/Absence	Photo
		bituminous material					
BH06	0-4.8	Fibro-cement sheet	3	No	Non-friable	Assumed asbestos-containing	12
	4.4	Malthoid	1	Yes	-	No asbestos detected	-
	4.5	Fibro-cement sheet	1	Yes	Non-friable	Chrysotile asbestos detected	-
BH09	0.5	Woven textile	1	Yes	-	No asbestos detected	13
	0-1.0	Fibro-cement sheet	5	No	Non-friable	Assumed asbestos-containing	-
		Woven textile	Multiple strands	Refer BH09_Debris0.5	-	No asbestos detected	-
BH10	0.0-1.0	Fibro-cement sheet	6	No	Non-friable	Assumed asbestos-containing	14
	1.0-1.5	Fibro-cement sheet	3	No	Non-friable	Assumed asbestos-containing	-
BH13	0.2	Fibro-cement sheet	1	No	Non-friable	Assumed asbestos-containing	-
BH14	0.1	Fibro-cement sheet	1	Yes	Non-friable	Chrysotile and amosite asbestos detected	-
	Side wall	Fibro-cement sheet	1	No	Non-friable	Assumed asbestos-containing	-
BH15	<0.1	Fibro-cement sheet	2	No	Non-friable	Assumed asbestos-containing	-
BH16	0.2	Fibro-cement product	4	Yes	Friable	Amosite asbestos detected	15

The asbestos-containing small fibrous material debris identified within BH16 were identified by Eurofins Scientific as a cement sheet product while being viewed under the microscope. Due to the materials size and condition the material was partially pulverisable under hand pressure.

It is unclear as to whether the material was in this condition prior to disturbance or if the auger damaged the asbestos-containing cement product while boring.

It should be noted that the soil bore method used for the bulk of the field works, as part of this ESA, are insufficient to accurately identify the magnitude of asbestos-related issues onsite, especially with regards to location and spread of debris. This is due to the small surface area of disturbance caused by the sampling methods.

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5 QUALITY ASSURANCE AND QUALITY CONTROL

A review of data associated with this investigation has been completed by SCAADA Environmental. Analysis for all analytes within all samples was completed within the laboratories recommended holding times. Fieldworks and sampling procedures were completed in general accordance with the Australian Standard 4482.1, *Guide to the investigation and sampling of sites with potentially contaminate soil, Part 1: Non-volatile and Semi-volatile compounds* (Standards Australia 2005). The analytical results reported for the field quality control samples are presented in Table 3 in Appendix B.

5.1 BLANK SAMPLES

Trip blanks are prepared to evaluate if any cross contamination occurred during the transport of samples from the field to the laboratory. Trip blanks are prepared at a rate of one blank per transport container (esky). One trip blank was prepared across the completion of fieldworks. The analytical results, from the trip blank, returned results below the limits of detection.

Rinsate blanks are collected to evaluate if the equipment used during sampling is likely to have cross contaminated samples between collection. Rinsate blanks are prepared at a rate of one per day if hand sampling equipment had been used that day. One rinsate blanks was prepared across the completion of fieldworks. The analytical results for all analytes, from the field blank, returned results below the limits of detection.

5.2 FIELD DUPLICATES

Collection of field duplicates and field triplicates samples was undertaken at a rate of at least one set per twenty samples to be analysed. The collection of duplicates was spread out spatially and over time. Duplicate samples were analysed at the primary laboratory (Eurofins Scientific) while triplicate samples were analysed at a secondary laboratory (ALS).

As per the recommendations in Schedule B3 of the ASC NEPM, a general acceptance criteria of 30% for the relative percentage difference (RPD) of field duplicates collected as part of this assessment has been adopted. The NEPM suggests that should any exceedances above the general acceptance criteria occur, an investigation into its cause be undertaken.

The RPDs reported with exceedances of the general acceptance criteria were for cadmium (D1_6923), chromium (T2_6923), copper (D1_6923 & T1_6923), lead (D1_6923), mercury (D1_6923 & T1_6923), C15-C28 fraction (T1_6923), C29-C36 fraction (D1_6923 & T1_6923), C10-C36 fraction (sum) (T1_6923), >C16-C34 fraction (F3) and >C10-C40 fraction (sum) (T1_6923).

The variability of these results is considered to be caused by the heterogenous nature of the soil with regards to exceedances reported for D1_6923 and T1_6923. The material divided between BH10_3.8, D1_6923 and T1_6923 was unable to be properly homogenised due to being a clay based soil and the debris within presenting safety concerns around the method of homogenisation. It is also noted that the cadmium RPD exceedances had concentrations below the laboratory limit of reporting (LOR) (D1_6923) and the primary was above.

The Eurofins Scientific report states that Global RPD Duplicate Acceptance Criteria is 30%, however the following RPD acceptance guideline is equally applicable:

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Table 6: Eurofins QC Acceptance Criteria

Result	RPD Range
<10 times LOR	No Limit
10-20 times LOR	0-50%
>20 times LOR	0-30%

SCAADA Environmental believes that these RPD exceedances are unlikely to influence the findings of this investigation based on the above points and knowledge that 12 of the 13 reported RPD exceedances occurred within a suspected landfill cell that is heterogenous in nature and was unable to be homogenised.

5.3 LABORATORY QUALITY CONTROL

Samples were submitted to the primary laboratory (Eurofins Scientific) under one chain of custody document (COC). Because of this, two sample receipt advice documents (SRA) were issued for the project. The SRA reported correct sample containers being used, zero headspace for volatile analysis, an attempt to chill was evident, and all samples were received in good condition. All samples were delivered to the Eurofins' satellite office in Grovedale, Victoria on the 8th of September, 2023, the same day the final samples were collected. When delivered, samples were handed over to Eurofins laboratory personnel at the sample receipt point.

6

7 ASSESSMENT CRITERIA

7.1 WASTE SOIL HAZARD CATEGORISATION THRESHOLD LIMITS

The reported laboratory results have been compared against threshold limits listed in EPA Victoria Publication 1828.2 *Waste disposal categories – characteristics and thresholds*, to determine the waste soil hazard categorisation of the material on site.

7.2 SOIL ASSESSMENT CRITERIA

The National Environment Protection Council (NEPC) formulated the National Environment Protection (Assessment of Site Contamination) Measure (NEPM) in 1999. This included investigation levels for soil and groundwater in the assessment of site contamination (NEPC, 2013). In April 2013 an amendment to the NEPM was approved and included new ecological and health investigation and screening levels (NEPC, 2013). This is referred to from now on as “the NEPM”.

The NEPM includes human health and ecological investigation levels (HIL and EIL) for a range of metals, inorganic compounds and organic compounds. Screening levels (HSL and ESL) have been provided for petroleum hydrocarbons. Both the investigation levels and screening levels are applied in the same manner in that they are the upper concentrations of a contaminant above which further investigation may be required.

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In addition to the NEPM criteria, other specific criteria from a variety of sources have been selected for use as part of this assessment. The specific criteria sources and justifications for their use have been detailed under the relevant sections below in section 6.2.1.

7.2.1 Environmental Values Assessment Criteria

In order to determine if any contaminants are at concentrations that may present a potential human health or ecological risk, the reported results have been compared to adopted assessment criteria.

The regulatory framework for the environmental assessment of land within the State of Victoria is detailed in Part 4 of the Environment Reference Standard (Victoria Government, May 2021) (ERS).

The environmental values of land that require protection are highlighted below in Table 77 The environmental values are based on the use of the site as a car park.

Table 7: Protected Environmental Values*

Environmental Value	Land Use						
	Parks & Reserves	Agricultural	Sensitive Use		Recreational/ Open Space	Commercial	Industrial
			High Density	Other			
Maintenance of Ecosystems							
<ul style="list-style-type: none"> • Natural • Modified • Highly modified 	✓	✓	✓	✓	✓	✓	✓
Human Health	✓	✓	✓	✓	✓	✓	✓
Buildings & Structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓		✓	✓	✓	✓	
Production of Food, Flora & Fibre	✓	✓		✓			

* This table has been reproduced from Table 4.2 from the Environment Reference Standard (Victorian Government, 2021).

Due to the proposed development of a carpark at the site, the reported sample results have been compared to commercial criteria based on the relevant environmental values.

Maintenance of Ecosystems

To assess the protection of the environmental values of 'Maintenance of Ecosystems', Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) have been adopted as per Schedule B1 of the *National Environmental Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013, including errata updated 30 April 2014* (NEPC, 2013). Commercial/Industrial criteria have been selected for assessment against reported soil analytical results.

As detailed in the NEPM, site specific EILs can be calculated for chromium (III), copper, nickel and zinc using key physical-chemical soil properties and ambient background conditions. The following physical-chemical soil property values have been used to calculate site specific EILs:

- pH: 8.6
- CEC: 19 meq/100g
- Clay: 3.7 %
- TOC: 0.1 %

The above physical-chemical soil property values were reported for sample BH04_2.3. SCAADA Environmental has not selected the lowest pH value reported for this assessment, as the pH selected needs to be obtained using the calcium chloride method, of which only one sample was analysed for.

The site specific EILs were calculated using the Ecological Investigation Level calculation spreadsheet sourced from the NEPM toolbox, these outputs have been included within Appendix G. EILs for aged contamination (> 2 years) were adopted.

As the NEPM ESL for benzo(a)pyrene has low reliability and is regarded as being outdated, SCAADA Environmental have adopted the benzo(a)pyrene ecological guideline published in CRC CARE Technical Report No. 39 – *Risk-based management and remediation guidance for benzo(a)pyrene* (CRC CARE, 2017), as it is more recent and has higher reliability.

It is noted that current zoning for Cowies Creek identifies a portion of the water body that runs on the opposite side of Morgan St as being within a Public Conservation and Resource Zone. The implication of this is that the NEPM guidance states a site assessment should also consider the possibility that contamination may migrate off-site and impact the area where 99% species protection limits would apply.

Human Health

In order to determine the potential risks associated with the environmental values of ‘Human Health’, soil samples were compared to Health Investigation Levels (HILs) listed in NEPM 2013. Specifically, exposure setting HIL D (Commercial/Industrial) has been adopted based on the assumption that the site will be zoned as commercial/industrial prior to the carp park development commencing.

The Health Screening Levels (HSLs) for direct soil contact listed in CRC CARE Technical Report no. 10 - *Health screening levels for petroleum hydrocarbons in soil and groundwater. Part 1: Technical development document* (CRC CARE, 2011) have also been adopted to assess the potential risk associated with contact with petroleum hydrocarbon impacted soil.

Buildings and Structures

The ERS states that contaminants that have been introduced to a groundwater environment must not cause it to become corrosive to structures or building materials. The Australian Standard AS 2159-2009 *Piling-design and installation* provides assessment criteria to indicate potential corrosivity to buildings and structures based on pH and sulfate concentrations reported at the site, as summarised below in Table 8. Field observations and the reported pH levels from soil samples have been assessed against these criteria to indicate potential corrosivity to buildings and structures.

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Table 8: Adopted assessment criteria for the beneficial use Buildings and Structures

Exposure condition			Exposure Classification		
Sulphates (expressed as SO ₄)		pH	Chlorides in groundwater (mg/L)	Soil conditions A [^]	Soil conditions B ^{^^}
In soil (mg/kg)	In groundwater (mg/L)				
<5,000	<1,000	>5.5	<6,000	Mild	Non-Aggressive
5,000 – 10,000	1,000 – 3,000	4.5 – 5.5	6,000 – 12,000	Moderate	Mild
10,000 – 20,000	3,000 – 10,000	4 – 4.5	12,000 – 30,000	Severe	Moderate
>20,000	>10,000	<4	>30,000	Very Severe	Severe

Table adopted from AS2159 – 2009 Piling – Design and Installation. Shading indicates soil conditions applicable at the site

[^] Soil conditions A - high permeability soils (e.g., sands and gravels) which are in groundwater

^{^^} Soil conditions B - low permeability soils (e.g., silts and clays) or all soils above groundwater.

Aesthetics

It is stated in the ERS that “contamination must not cause the land to be offensive to the senses of human beings” however there are currently no concentration-based criteria for soil for the beneficial use ‘Aesthetics’. Site observations, including any discolouration and obvious odours, are used as indicators as to the potential risk of the environmental values of ‘Aesthetics’. The site observations made by SCAADA Environmental staff during the validation works are detailed in Section 4.3.

The TPH Management Limits detailed in NEPM 2013 have also been adopted as part of the assessment.

7.2.2 Summary of Assessment Criteria

In summary, the beneficial uses and NEPM assessment criteria commensurate with the site land uses are:

- NEPM Ecological Investigation/Screening Levels (EIL/ESL) – to assess potential risks to terrestrial ecosystem based on the Commercial/Industrial land use setting. The following documents were used as sources of relevant criteria;
 - Ecological Investigation Level calculation spreadsheet sourced from the NEPM toolbox.
- NEPM Health Investigation/Screening Levels (HIL-D, HSL-D) – Commercial/Industrial, includes premises such as shops, offices, factories and industrial sites. The following documents were used as sources of relevant criteria;
 - Technical Report no. 10, *Health screening levels for petroleum hydrocarbons in soil and groundwater, Summary* (CRC CARE 2011); and
 - Technical Report no. 39, *Risk-based management and remediation guidance for benzo(a)pyrene* (CRC CARE 2017).

8 RESULTS AND DISCUSSION

8.1 WASTE SOIL HAZARD CATEGORISATION

Analytical results for the soil samples collected as part of this investigation have been compared against threshold limits listed in EPA Victoria Publication 1828.2 and are presented in Table 1, Appendix B. Laboratory chain of custody documents and the certified laboratory reports are provided in Appendix C.

Results have been assessed as parts of their applicable domains described within Table 4 of section 4.3.6.

8.1.1 Domain 1

- The reported analytical concentrations for the following samples and analytes exceeded the upper threshold limit for 'Category B' material:
 - Copper (BH10_0.4)
 - Lead (BH05_1.0 & BH10_0.4)
- The reported analytical concentrations for copper and lead exceeded the upper threshold limit for 'Category D' material in sample BH10_1.0.
- Sample BH11_0.4 reported a pH value below 4, resulting in the material being a non-corrosive acids.
 - This pH may indicate the presence of Potential Acid Sulfate Soil, further sampling and analysis would be required to assess the soil.
- The reported concentrations of arsenic exceeded the 'Fill Material' upper limit in samples BH04_0.3, BH05_1.0, BH10_0.4, BH10_1.0, BH11_0.4 and BH13_0.3.
- The reported concentrations of cadmium exceeded the 'Fill Material' upper limit in samples BH10_0.4 and BH10_1.0.
- The reported concentrations of copper exceeded the 'Fill Material' upper limit in samples BH05_1.0 and BH11_0.4.
- The reported concentration of mercury exceeded the 'Fill Material' upper limit in sample BH05_1.0.
- The reported concentrations of nickel exceeded the 'Fill Material' upper limit in samples BH05_1.0, BH10_0.4, BH10_1.0, BH11_0.4 and BH13_0.3.
- The reported concentration of tin exceeded the 'Fill Material' upper limit in sample BH13_0.3.
- The reported concentrations of zinc exceeded the 'Fill Material' upper limit in samples BH05_1.0, BH09_0.4, B10_0.4, BH10_1.0, BH11_0.4 and BH14_0.15.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- Non-friable asbestos-containing material was observed in multiple positions throughout the assessment area within this domain.

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8.1.2 Domain 2

- Sample BH06_0.9 reported concentrations of arsenic, copper, nickel and zinc which exceeded the 'Fill Material' upper limit.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.

8.1.3 Domain 3

- All reported analytical results for this domain were below the 'Fill Material' upper limit.

8.1.4 Domain 4

- All reported analytical results for this domain were below the 'Fill Material' upper limit.

8.1.5 Domain 5

- The reported analytical concentration for lead in sample BH10_4.9 exceeded the upper threshold limit for 'Category D' material.
- The reported concentrations of arsenic exceeded the 'Fill Material' upper limit in samples BH01_1.4, BH09_4.9, BH09_5.4 and BH10_4.9.
- The reported concentration of cadmium exceeded the 'Fill Material' upper limit in sample BH09_5.4.
- The reported concentrations of copper exceeded the 'Fill Material' upper limit in samples BH09_4.9 and BH10_4.9.
- The reported concentrations of mercury exceeded the 'Fill Material' upper limit in samples BH01_1.4 and BH10_3.8.
- The reported concentrations of nickel exceeded the 'Fill Material' upper limit in samples BH02_4.2 and BH09_4.9.
- The reported concentrations of zinc exceeded the 'Fill Material' upper limit in samples BH01_1.4, BH09_4.9, BH09_5.4 and BH10_4.9.
- The reported concentrations of C10-C36 Fraction (Sum) exceeded the 'Fill Material' upper limit in samples BH01_1.4 and BH10_4.9.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- Non-friable Asbestos-containing material was observed in within this domain.

8.1.6 Domain 7

- The reported concentrations of arsenic exceeded the 'Fill Material' upper limit in samples BH01_2.7 and BH04_2.3.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.

8.1.7 Miscellaneous

- All reported analytical results for sample BH03_0.9 were below the 'Fill Material' upper limit.

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8.2 ENVIRONMENTAL VALUES

8.2.1 Human Health Investigation Levels

- The reported lead concentrations for soil samples BH05_1.0, BH10_0.4, BH10_1.0 and BH10_4.9 were above the adopted HIL D criteria.
- A statistical assessment of the lead results was completed using ProUCL 5.2 software. Only samples from Domain 1, were used for this assessment. The statistical output (2,549 mg/kg) is included within Appendix F and determine the results to still exceed the adopted HIL D criteria.
- All other reported analytical results were below the adopted HIL D assessment criteria.

8.2.2 Health Screening Levels

- All reported analytical results were below the adopted HSL D assessment criteria.

8.2.3 Ecological Investigation Levels

- The reported arsenic concentration for soil sample BH04_0.3 was above the adopted EIL Commercial/Industrial criteria.
- The reported chromium (III+VI) concentration for soil sample BH05_1.0 was above the adopted EIL Commercial/Industrial criteria for chromium III.
 - Additional analysis of speciated chromium would be required to assess whether the EIL criteria for chromium III has been exceeded.
- The reported copper concentrations for soil samples BH05_1.0, BH10_0.4 and BH10_1.0 were above the adopted EIL Commercial/Industrial criteria.
- The reported nickel concentration for soil sample BH10_0.4 was above the adopted EIL Commercial/Industrial criteria.
- The reported zinc concentrations for soil samples BH09_5.4, BH10_0.4 and BH10_1.0 were above the adopted EIL Commercial/Industrial criteria.
 - It should be noted that while the zinc concentration exceeded the adopted assessment criteria, the EIL criteria only apply to the top 2mBGL. As such this finding is not currently an exceedance or area of concern.
- Statistical assessments of the arsenic, copper, nickel and zinc results was completed using ProUCL 5.2 software. Only samples from Domain 1, were used for this assessment. The statistical outputs (63.44 mg/kg, 16,419 mg/kg, 246 mg/kg and 5,295 respectively) are included within Appendix F.
 - The statistical outputs for arsenic and nickel are below the adopted EIL Commercial/Industrial criteria.
 - The statistical outputs for copper and zinc still exceed the adopted EIL Commercial/Industrial criteria.
 - In summary soil concentrations of zinc across the entire investigation area, calculated by 95% UCL average, is below the adopted ecological health criteria which does not indicate impacts to this environmental value across the entire site.
 - However, the exceedances detected for arsenic (BH04) and nickel (BH10) may indicate that there is a risk to ecological health in these particular locations and further investigation of the detected exceedances may be warranted.
- All other reported analytical results were below the adopted EIL Commercial/Industrial assessment criteria.

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8.2.4 Ecological Screening Levels

- All reported analytical results were below the adopted ESL Commercial/Industrial assessment criteria.

8.2.5 Total Recoverable Hydrocarbon Management Limits

- All reported analytical results were below the adopted TRH Management Limits assessment criteria.

8.2.6 Aesthetics

Impacts to aesthetic values on site were not detectable visually or via olfactory sense prior to soil disturbance works commencing. Significant inert waste was unsurfaced at varying depths throughout boreholes across the site. Red and black coloured sands were present at various depths in multiple boreholes, additionally a soil clod was observed with blue staining in BH7.

Hydrocarbon like odorous black stained soil was also encounter within the landfill cell.

8.2.7 Buildings and Structures

The reported pH values and associated soil descriptors have been compared with Table 8 of this report (Section 6.2.1) in order to assess the potential corrosivity to buildings and structures. Based on the reported pH values and relevant visually observed soil types on site it is suspected the potential worst case corrosivity exposure classification of the site is 'Severe' for Soil Condition B.

Further investigation would be required to assess the sulphates in soil and sulphates and chlorides in the groundwater across the site, which may result in a different exposure classification.

9 CONCLUSIONS

Following the completion of the soil assessment, SCAADA Environmental have made the following conclusions and recommendations:

- SCAADA Environmental attended site on the 6th and 8th of September 2023 and advanced sixteen (16) boreholes, from which forty-seven (47) soil samples were collected. Thirty (30) of which were selected for laboratory analysis.
- Based on observation made during soil sample collection, there are multiple soil domains present. These have been briefly summarised below:
 - Domain 1: **FILL:** SILT, Brown (Surface domain), Inert debris, Asbestos-containing debris
 - Domain 2: **FILL:** SILTY CLAY, Brown
 - Domain 3: **FILL:** CLAY, Grey
 - Domain 4: **FILL:** SANDS, Black and red
 - Domain 5: **FILL:** SUSPECTED LANDFILL, Rubbish, Asbestos-containing debris Mottled clays and Black stained clays with hydrocarbon like odour
 - Domain 6: SANDY CLAY, Yellow
 - Domain 7: **NATURAL:** CLAY, Yellow

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9.1 WASTE CATEGORISATION

Domain 1

- The reported analytical concentrations for the following samples and analytes exceeded the upper threshold limit for 'Category B' material:
 - Copper (BH10_0.4)
 - Lead (BH05_1.0 & BH10_0.4)
- The reported analytical concentrations for copper and lead exceeded the upper threshold limit for 'Category D' material in sample BH10_1.0.
- Sample BH11_0.4 reported a pH value below 4, resulting in the material being a non-corrosive acids.
 - This pH may indicate the presence of Potential Acid Sulfate Soil, further sampling and analysis would be required to assess the soil.
- Reported analytical results for arsenic, cadmium, copper, mercury, nickel, and zinc exceeded the upper threshold limit for 'Fill Material' in multiple samples.
- All other analyte results for this domain were below the 'Fill Material' upper limit.
- Non-friable asbestos-containing material was observed in multiple positions throughout the assessment area within this domain.
 - The method used for the investigation is limited with regards to asbestos-containing debris due to the limited surface area being investigated for each borehole.
 - The debris identified in BH16 was very small diameter, estimated to be 10x5x2mm by Eurofins Scientific. Due to the materials size and condition the material was partially pulverisable under hand pressure. It is unclear as to whether the material was in this condition prior to disturbance or if the auger damaged the asbestos-containing cement product while boring.
- To summarise the above conclusions Domain 1 has been given a preliminary categorisation of 'Category A with asbestos'.

Domain 2

- Sample BH06_0.9 reported concentrations of arsenic, copper, nickel, and zinc which exceeded the 'Fill Material' upper limit.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 2 has been given a preliminary categorisation of 'Category D'.

Domain 3

- All reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 3 has been given a preliminary categorisation of 'Fill Material'.

Domain 4

- All reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 3 has been given a preliminary categorisation of 'Fill Material'.

Domain 5

- The reported analytical concentration for lead in sample BH10_4.9 exceeded the upper threshold limit for 'Category D' material.
- Reported analytical results for arsenic, cadmium, copper, mercury, nickel, zinc, and C10-C36 Fraction (Sum) exceeded the upper threshold limit for 'Fill Material' in multiple samples.

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- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 5 has been given a preliminary categorisation of 'Category C'.

Domain 6

- Domain 6 was not sampled as part of this assessment due to being located below the anticipated depth required for excavation as part of the car park.

Domain 7

- The reported concentrations of arsenic exceeded the 'Fill Material' upper limit in samples BH01_2.7 and BH04_2.3.
- All other reported analytical results for this domain were below the 'Fill Material' upper limit.
- To summarise the above conclusions Domain 7 has been given a preliminary categorisation of 'Category D'.

9.2 ENVIRONMENTAL VALUES

Human Health Investigation Levels

- The reported lead concentrations for soil samples BH05_1.0, BH10_0.4, BH10_1.0 and BH10_4.9 were above the adopted HIL D criteria.
- A statistical assessment of the lead results was completed using ProUCL 5.2 software. Only samples from Domain 1, were used for this assessment. The statistical output (2,549 mg/kg) is included within Appendix F and determine the results to still exceed the adopted HIL D criteria.
- All other reported analytical results were below the adopted HIL D assessment criteria.

Health Screening Levels

- All reported analytical results were below the adopted HSL D assessment criteria.

Ecological Investigation Levels

- Current zoning for Cowies Creek identifies a portion of the water body that runs on the opposite side of Morgan St as being within a Public Conservation and Resource Zone. Offsite migration of identified contamination into the applicable portion of Cowies Creek has not been assessed as part of this ESA.
- The reported arsenic concentration for soil sample BH04_0.3 was above the adopted EIL Commercial/Industrial criteria.
- The reported chromium (III+VI) concentration for soil sample BH05_1.0 was above the adopted EIL Commercial/Industrial criteria for chromium III.
 - Additional analysis of speciated chromium would be required to assess whether the EIL criteria for chromium III has been exceeded.
- The reported copper concentrations for soil samples BH05_1.0, BH10_0.4 and BH10_1.0 were above the adopted EIL Commercial/Industrial criteria.
- The reported nickel concentration for soil sample BH10_0.4 was above the adopted EIL Commercial/Industrial criteria.
- The reported zinc concentrations for soil samples BH09_5.4, BH10_0.4 and BH10_1.0 were above the adopted EIL Commercial/Industrial criteria.

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- It should be noted that while the zinc concentration exceeded the adopted assessment criteria, the EIL criteria only apply to the top 2mBGL. As such this finding is not currently an exceedance or area of concern.
- Statistical assessments of the arsenic, copper, nickel and zinc results was completed using ProUCL 5.2 software. Only samples from Domain 1, were used for this assessment. The statistical outputs (63.44 mg/kg, 16,419 mg/kg, 246 mg/kg and 5,295 respectively) are included within Appendix F.
 - The statistical outputs for arsenic and nickel are below the adopted EIL Commercial/Industrial criteria.
 - The statistical outputs for copper and zinc still exceed the adopted EIL Commercial/Industrial criteria.
 - In summary soil concentrations of zinc across the entire investigation area, calculated by 95% UCL average, is below the adopted ecological health criteria which does not indicate impacts to this environmental value across the entire site.
 - However, the exceedances detected for arsenic (BH04) and nickel (BH10) may indicate that there is a risk to ecological health in these particular locations and further investigation of the detected exceedances may be warranted.
- All other reported analytical results were below the adopted EIL Commercial/Industrial assessment criteria.

Ecological Screening Levels

- All reported analytical results were below the adopted ESL Commercial/Industrial assessment criteria.

TRH Management Limits

- All reported analytical results were below the adopted TRH Management Limits assessment criteria.

Aesthetics

Soil that impacts aesthetic values was encountered on site during the advancement of soil bores as part of this assessment. SCAADA Environmental believes it unlikely that these impacts will be realised while soil remains undisturbed and maintains a vegetative cover to reduce disturbance of the topsoil.

Buildings and Structures

The reported pH values and associated soil descriptors have been compared with Table 7 of this report (Section 6.2.1) in order to assess the potential corrosivity to buildings and structures. Based on the reported pH values and relevant visually observed soil types on site it is suspected the Potential worst case corrosivity exposure classification of the site is Severe for Soil Condition B.

Further investigation would be required to assess the sulphates in soil and sulphates and chlorides in the groundwater across the site, which may result in a different exposure classification.

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10 RECOMMENDATIONS

Soil Waste Hazard Categorisation

- Current data is insufficient to categorise the entirety of any domain across the full extent of the site. Should disposal of soil offsite be required, further sampling and laboratory analysis will be required to meet the requirements of Industrial Waste Resource Guidelines (IWRG702), *Soil Sampling* and EPA Publication 1828.2.
- Pending further sampling and analysis results, consideration should be given to the potential use of delineation and statistical analysis in an effort to reduce the categorisation of all/sections of soil requiring offsite disposal.

Asbestos

- Due to the limitations of the sampling methodology, the current extent/nature of the asbestos contamination throughout the site is unknown. SCAADA Environmental recommends a further site investigation into the extent and nature (Friable/non-friable) asbestos contamination throughout the site prior to development works commencing.
- Findings of severely damaged asbestos-containing cement product in BH16 should be specifically evaluated as part of the subsequent investigation to determine if the sampled material was a result of the advancement of the borehole or if the debris was in that condition prior to disturbance.
- SCAADA Environmental also advises an asbestos management plan (AMP) be developed for the site to inform management options with regards to asbestos until development works commence. Pending the development of an AMP for the site all future soil disturbance activities should be done under asbestos conditions with an licensed asbestos removal contractor in line with relevant legislative, regulatory and WorkSafe Victoria requirements.

Potential Acid Sulfate Soils

- The pH result (3.8) observed in BH11_0.4 has raised concerns around the presence of potential acid sulfate soils and should be further investigated. The findings of this investigation will impact off-site disposal and long-term management of the site if soil is classified as Actual Acid Sulfate Soil.

Human Health Investigation Levels

- SCAADA Environmental provides the following recommendations for consideration with regards to the Human Health Investigation Level Exceedances (HIL D) – Lead:
 - If the soil is to remain in-situ onsite, a further site-specific risk assessment of lead with regards to potential human health impacts would be required for both the current and proposed land use.
 - Removal and disposal of soil in this position to a lawful place.

Ecological Investigation Levels

- SCAADA Environmental recommends further investigation into the potential for offsite migration of identified contamination into the 99% species protection segment of Cowies Creek.
- SCAADA Environmental provides the following recommendations for consideration with regards to the Ecological Investigation Level Exceedances (Commercial/Industrial) - chromium:
 - If the soil is to remain in-situ onsite:
 - Undertake a speciated chromium analysis to obtain the chromium III concentration as opposed the chromium III and VI concentration of the soil in question. This will allow accurate determination of if there is an exceedance against the chromium III criteria.

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- A further site-specific risk assessment of chromium III with regards to potential ecological impacts would be required for both the current and proposed land use.
 - Removal and disposal of soil in this position to a lawful place
- SCAADA Environmental provides the following recommendations for consideration with regards to the Ecological Investigation Level Exceedances (Commercial/Industrial) – Copper & Zinc:
 - If the soil is to remain in-situ onsite, a further site-specific risk assessment, with regards to potential ecological impacts would be required for both the current and proposed land use.
 - Removal and disposal of soil in this position to a lawful place.
- SCAADA Environmental provides the following recommendations for consideration with regards to the Ecological Investigation Level Exceedances (Commercial/Industrial) – Arsenic and Nickel:
 - Removal and disposal of soil in this position to a lawful place.
 - Should the soil remain in-situ onsite consideration should be given to a further investigation into the ecological impacts posed by the arsenic and nickel exceedances in their identified positions.

Buildings and Structures

- Consideration should be given to further investigation of the following:
 - Potential corrosivity exposure classification of the site. Current data is insufficient to confidently determine the exposure classification. Further investigation would be required to assess the sulphates in soil and sulphates and chlorides in the groundwater across the site.

General

- While landfill gas was not assessed as part of this investigation, SCAADA Environmental recommends a landfill gas risk assessment be undertaken prior to commencing proposed development works.
- While groundwater was not assessed as part of this investigation, the discovery of the landfill cell aligns with recommendations made within the SCAADA Environmental PSI. This recommendation was for consideration to be given to the installation of groundwater monitoring wells and a groundwater monitoring program for the site to assess potential on-site and off-site impacts.

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APPENDIX A – SITE FIGURES

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Source: Near Maps 2023

Figure 1
 Environmental Site Assessment - Sample locations
 43 The Boulevard, Norlane, VIC 3214

● Apox. Sample locations
 — Property border



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APPENDIX B – ANALYTICAL RESULTS TABLES

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Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - 1828.2

	Unit	EQL	EPA Vic IWRG1828.2 Category B upper limit	EPA Vic IWRG1828.2 Category C upper limit	EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit	EPA Vic IWRG1828.2 Fill material upper limit	Field ID	BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3
							Domain	4	5	7	1	5	N/A	1	7
							Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
Inorganics															
Conductivity (1:5 aqueous extract)	µS/cm	10					-	-	-	-	-	-	-	-	330
Cation Exchange Capacity	meq/100g	0.5					-	-	-	-	-	-	-	-	19
Cyanide (Free)	mg/kg	5					-	-	-	<5	-	-	-	-	<5
Cyanide Total	mg/kg	5	10,000	2,500	2,500	50	-	-	-	<5	-	-	-	-	-
Fluoride	mg/kg	100	40,000	10,000	10,000	450	-	-	-	<100	-	-	-	-	-
Moisture Content (dried @ 103°C)	%	1					1.3	10	13	3.8	14	2.5	10	7.0	
pH (1:5 aqueous extract)	-	0.1	≤2 or ≥12.5		<4 or >10		8.3	7.6	-	7.7	7.5	-	6.8	-	
pH (Lab)	-	0.1	≤2 or ≥12.5		<4 or >10		-	-	-	-	-	-	-	-	8.6
Metals															
Iron (%)	%	0.01					-	-	-	-	-	-	-	-	6.3
Arsenic	mg/kg	2	2,000	500	500	20	3.8	32	100	7.1	8.6	<2	170	84	
Barium	mg/kg	10	25,000	6,250	6,250		-	160	-	47	-	-	110	-	
Beryllium	mg/kg	2	400	100	100		-	<2	-	<2	-	-	3.2	3.1	
Boron	mg/kg	10	60,000	15,000	15,000		-	<20	-	-	-	-	<20	<20	
Cadmium	mg/kg	0.4	400	100	100	3	<0.4	0.5	<0.4	0.8	<0.4	<0.4	<0.4	<0.4	
Chromium (hexavalent)	mg/kg	1	2,000	500	500	1	-	-	-	<1	-	-	-	<1	
Chromium (III+VI)	mg/kg	5					53	95	37	34	63	<5	86	50	
Cobalt	mg/kg	5					-	14	-	<5	-	-	26	31	
Copper	mg/kg	5	20,000	5,000	5,000	100	15	83	6.0	66	39	66	6.2	<5	
Iron	mg/kg	20					-	-	-	-	-	-	-	63,000	
Lead	mg/kg	5	6,000	1,500	1,500	300	12	89	6.8	71	17	9.8	11	5.8	
Manganese	mg/kg	5					-	460	-	380	-	-	160	250	
Mercury	mg/kg	0.1	300	75	75	1	0.1	4.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Molybdenum	mg/kg	5	4,000	1,000	1,000	40	-	-	-	<5	-	-	-	-	
Nickel	mg/kg	5	12,000	3,000	3,000	60	12	30	16	19	62	11	52	24	
Selenium	mg/kg	2	40,000	10,000	10,000	10	-	<2	-	<2	-	-	2.1	<2	
Silver	mg/kg	2	720	180	180	10	-	-	-	<2	-	-	-	-	
Tin	mg/kg	10					-	-	-	<10	-	-	-	-	
Vanadium	mg/kg	10					-	68	-	-	-	-	400	-	
Zinc	mg/kg	5	140,000	35,000	35,000	200	44	450	25	140	150	59	37	28	
BTEX															
Naphthalene (VOC)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1	16	4	4	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	12,800	3,200	3,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	4,800	1,200	1,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2					<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3	9,600	2,400	2,400		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH															
C6-C9 Fraction	mg/kg	20	2,600	650	325	100	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20	<20
C15-C28 Fraction	mg/kg	50					<50	910	<50	57	<50	<50	<50	<50	<50
C29-C36 Fraction	mg/kg	50					<50	170	<50	<50	<50	<50	<50	<50	<50
C10-C36 Fraction (Sum)	mg/kg	50	40,000	10,000	5,000	1,000	<50	1,080	<50	57	<50	<50	<50	<50	<50
C6-C10 Fraction (F1)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20	<20
C6-C10 (F1 minus BTEX)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20	<20
>C10-C16 Fraction (F2)	mg/kg	50					<50	<50	<50	<50	<50	<50	<50	<50	<50
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50					<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 Fraction (F3)	mg/kg	100					<100	1,300	<100	<100	<100	<100	<100	<100	<100
>C34-C40 Fraction (F4)	mg/kg	100					<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 Fraction (Sum)	mg/kg	100					<100	1,300	<100	<100	<100	<100	<100	<100	<100
PAH															
Acenaphthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Table 1
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43 The Boulevard, Norlane
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			Field ID											
			BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3				
			4	5	7	1	5	N/A	1	7				
Domain														
Date	06 Sep 2023													
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D /	EPA Vic IWRG1828.2 Fill material/upper								
Acenaphthylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a) pyrene	mg/kg	0.5	160	40	20	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5					0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5					1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PAHs (Sum of total)	mg/kg	0.5	400	100	50	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PCBs														
Arochlor 1016	mg/kg	0.1					-	-	-	<0.1	-	-	-	<0.1
Arochlor 1221	mg/kg	0.1					-	-	-	<0.1	-	-	-	<0.1
Arochlor 1232	mg/kg	0.1					-	-	-	<0.1	-	-	-	<0.1
Arochlor 1242	mg/kg	0.1					-	-	-	<0.1	-	-	-	<0.1
Arochlor 1248	mg/kg	0.1					-	-	-	<0.1	-	-	-	<0.1
Arochlor 1254	mg/kg	0.1					-	-	-	<0.1	-	-	-	<0.1
Arochlor 1260	mg/kg	0.1					-	-	-	<0.1	-	-	-	<0.1
PCBs (Sum of total)	mg/kg	0.1	*	50	2	2	-	-	-	<0.1	-	-	-	<0.1
Phenols														
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4					-	-	-	<0.4	-	-	-	<0.4
2,4,5-Trichlorophenol	mg/kg	1	64,000	16,000	16,000		-	-	-	<1	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	1	320	80	80		-	-	-	<1	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.5	3,200	800	800		-	-	-	<0.5	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.5					-	-	-	<0.5	-	-	-	-
2,4-Dinitrophenol	mg/kg	5					-	-	-	<5	-	-	-	-
2,6-Dichlorophenol	mg/kg	0.5					-	-	-	<0.5	-	-	-	-
2-Chlorophenol	mg/kg	0.5	4,800	1,200	1,200		-	-	-	<0.5	-	-	-	-
2-Methylphenol	mg/kg	0.2					-	-	-	<0.2	-	-	-	<0.2
2-Nitrophenol	mg/kg	1					-	-	-	<1	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	0.5					-	-	-	<0.5	-	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20					-	-	-	<20	-	-	-	-
4-chloro-3-methylphenol	mg/kg	1					-	-	-	<1	-	-	-	-
4-Nitrophenol	mg/kg	5					-	-	-	<5	-	-	-	-
Cresol Total	mg/kg	0.5	32,000	8,000	8,000		-	-	-	<0.5	-	-	-	-
Pentachlorophenol	mg/kg	1					-	-	-	<1	-	-	-	<1
Picloram	mg/kg	0.5					-	-	-	-	-	-	-	<0.5
Tetrachlorophenols	mg/kg	10					-	-	-	<10	-	-	-	-
Phenol	mg/kg	0.5					-	-	-	<0.5	-	-	-	<0.5
Phenols (Total Halogenated)	mg/kg	1				1	-	-	-	<1	-	-	-	-
Phenols (Total Non Halogenated)	mg/kg	20	2,200	560	560	60	-	-	-	<20	-	-	-	-
Particle Size														
% Clay*	%	1					-	-	-	-	-	-	-	3.7
Other														
Actril (loxynil)	mg/kg	0.5					-	-	-	<0.5	-	-	-	-
Chlorinated Hydrocarbons														
Chlorinated hydrocarbons EPAVic	mg/kg	0.5				1	-	-	-	<0.5	-	-	-	-



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			Field ID	BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3
			Domain	4	5	7	1	5	N/A	1	7
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D / Category E/upper	EPA Vic IWRG1828.2 Fill material/upper					
Other chlorinated hydrocarbons											
EPAVic	mg/kg	0.5					<0.5	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.5	1,600	400	400		<0.5	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5	4,800	1,200	1,200		<0.5	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5	210	52	52		<0.5	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5	190	48	48		<0.5	-	-	-	-
1,1-dichloroethane	mg/kg	0.5					<0.5	-	-	-	-
1,1-dichloroethene	mg/kg	0.5	480	120	120		<0.5	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5					<0.5	-	-	-	-
1,2-dichloroethane	mg/kg	0.5	48	12	12		<0.5	-	-	-	-
1,2-dichloropropane	mg/kg	0.5					<0.5	-	-	-	-
1,3-dichloropropane	mg/kg	0.5					<0.5	-	-	-	-
Bromochloromethane	mg/kg	0.5					<0.5	-	-	-	-
Bromodichloromethane	mg/kg	0.5					<0.5	-	-	-	-
Bromoform	mg/kg	0.5					<0.5	-	-	-	-
Carbon tetrachloride	mg/kg	0.5	48	12	12		<0.5	-	-	-	-
Chlorodibromomethane	mg/kg	0.5					<0.5	-	-	-	-
Chloroethane	mg/kg	0.5					<0.5	-	-	-	-
Chloroform	mg/kg	0.5	960	240	240		<0.5	-	-	-	-
Chloromethane	mg/kg	0.5					<0.5	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5					<0.5	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5					<0.5	-	-	-	-
Dibromomethane	mg/kg	0.5					<0.5	-	-	-	-
Dichloromethane	mg/kg	0.5	64	16	16		<0.5	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5	11	2.8	2.8		<0.5	-	-	-	-
Trichloroethene	mg/kg	0.5	80	20	20		<0.5	-	-	-	-
Tetrachloroethene	mg/kg	0.5	800	200	200		<0.5	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5					<0.5	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5					<0.5	-	-	-	-
Vinyl chloride	mg/kg	0.5	4.8	1.2	1.2		<0.5	-	-	-	-
Halogenated Benzenes											
1,2,4-trichlorobenzene	mg/kg	0.05					<0.05	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5	24,000	6,000	6,000		<0.5	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5					<0.5	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5	640	160	160		<0.5	-	-	-	-
4-chlorotoluene	mg/kg	0.5					<0.5	-	-	-	-
Bromobenzene	mg/kg	0.5					<0.5	-	-	-	-
Chlorobenzene	mg/kg	0.5	4,800	1,200	1,200		<0.5	-	-	-	-
Hexachlorobenzene	mg/kg	0.05					<0.05	<0.05	<0.05	-	<0.05
Halogenated Hydrocarbons											
1,2-dibromoethane	mg/kg	0.5					<0.5	-	-	-	-
Bromomethane	mg/kg	0.5					<0.5	-	-	-	-
Dichlorodifluoromethane	mg/kg	0.5					<0.5	-	-	-	-
Iodomethane	mg/kg	0.5					<0.5	-	-	-	-
Trichlorofluoromethane	mg/kg	0.5					<0.5	-	-	-	-
Herbicides											
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					<0.5	-	-	-	<0.5
2,4,5-TP (Silvex)	mg/kg	0.5					<0.5	-	-	-	-
Hedonal	mg/kg	0.5	480	120	120		<0.5	-	-	-	<0.5
2,4-Dichloroprop	mg/kg	0.5					<0.5	-	-	-	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5					<0.5	-	-	-	-
Atrazine	mg/kg	0.2					<0.2	-	-	-	<0.2
Dicamba	mg/kg	0.5					<0.5	-	-	-	-
Dinoseb	mg/kg	0.5					<0.5	-	-	-	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					<0.5	-	-	-	<0.5
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					<0.5	-	-	-	<0.5



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - 1828.2

			Field ID	BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3	
			Domain	4	5	7	1	5	N/A	1	7	
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D /	EPA Vic IWRG1828.2 Fill material/upper						
Mecoprop	mg/kg	0.5					<0.5	-	-	-	<0.5	
MAH						7						
Total MAH	mg/kg	0.5					<0.5	-	-	-	-	
1,2,4-trimethylbenzene	mg/kg	0.5					<0.5	-	-	-	-	
1,3,5-trimethylbenzene	mg/kg	0.5					<0.5	-	-	-	-	
Isopropylbenzene	mg/kg	0.5					<0.5	-	-	-	-	
Styrene	mg/kg	0.5	480	120	120		<0.5	-	-	-	-	
Organochlorine Pesticides												
Organochlorine pesticides EPAVic	mg/kg	0.1				1	<0.1	-	<0.1	0.27	<0.1	-
Other organochlorine pesticides												
EPAVic	mg/kg	0.1	50	10	10		<0.1	-	<0.1	<0.1	<0.1	-
4,4-DDE	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-
Aldrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	4.8	1.2	1.2		<0.05	-	<0.05	0.27	<0.05	<0.05
b-BHC	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-
Chlordane	mg/kg	0.1	16	4	4		<0.1	-	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-
DDD	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	50	50	50		<0.05	-	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05					<0.05	-	<0.05	0.27	<0.05	<0.05
Endosulfan I	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
Endrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-
Endrin ketone	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-
g-BHC (Lindane)	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-
Heptachlor	mg/kg	0.05	4.8	1.2	1.2		<0.05	-	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-
Methoxychlor	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	<0.05
Toxaphene	mg/kg	0.5					<0.5	-	<0.5	<0.5	<0.5	<0.5
Organic												
Total Organic Carbon	%						-	-	-	-	-	0.1
Organophosphorous Pesticides												
Tokuthion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Azinophos methyl	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Bolstar (Sulprofos)	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Chlorfenvinphos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Chlorpyrifos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Coumaphos	mg/kg	2					<2	-	<2	<2	<2	-
Demeton-O	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Demeton-S	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Diazinon	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Dichlorvos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Dimethoate	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Disulfoton	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Ethion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Ethoprop	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Fenitrothion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Fensulfothion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Fenthion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
EPN	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Malathion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Merphos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Methyl parathion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-
Mevinphos (Phosdrin)	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	-



Table 1
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				Field ID	BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3		
				Domain	4	5	7	1	5	N/A	1	7		
				Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023		
			EPA Vic IWRG1828.2 Category B upper	EPA Vic IWRG1828.2 Category C upper	EPA Vic IWRG1828.2 Category D / Industrial Waste	EPA Vic IWRG1828.2 Fill material upper								
Monocrotophos	mg/kg	2					<2	-	<2	-	<2	<2	-	-
Naled (Dibrom)	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Omethoate	mg/kg	2					<2	-	<2	-	<2	<2	-	-
Phorate	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Pyrazophos	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Ronnel	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Terbufos	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Trichloronate	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Tetrachlorvinphos	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Pesticides														
Bifenthrin	mg/kg	0.05					-	-	-	<0.05	-	-	-	<0.05
Mirex	mg/kg	0.05					-	-	-	-	-	-	-	<0.05
Parathion	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Pirimiphos-methyl	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	<0.2	-	-
Solvents														
Methyl Ethyl Ketone	mg/kg	0.5	32,000	8,000	8,000		-	-	-	<0.5	-	-	-	-
4-Methyl-2-pentanone	mg/kg	0.5					-	-	-	<0.5	-	-	-	-
Acetone	mg/kg	0.5					-	-	-	<0.5	-	-	-	-
Allyl chloride	mg/kg	0.5					-	-	-	<0.5	-	-	-	-
Carbon disulfide	mg/kg	0.5					-	-	-	<0.5	-	-	-	-

Environmental Standards

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category B upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category C upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Fill material upper limit

*Refer to the Polychlorinated biphenyls management plan (2003, Australian and New Zealand Environment and Conservation Council (ANZECC))



Table 1
Environmental Site Assessment
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Analytical Results - 1828.2

						Field ID	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
			EPA Vic IWRG1828.2 Category B upper limit	EPA Vic IWRG1828.2 Category C upper limit	EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit	EPA Vic IWRG1828.2 Fill material upper limit	5	4	4	5	2	2	2	4
	Unit	EQL					06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
Inorganics														
Conductivity (1:5 aqueous extract)	µS/cm	10					-	-	-	-	-	-	-	-
Cation Exchange Capacity	meq/100g	0.5					-	-	-	-	-	-	-	-
Cyanide (Free)	mg/kg	5					-	-	-	<5	-	-	-	-
Cyanide Total	mg/kg	5	10,000	2,500	2,500	50	-	-	<5	-	-	-	-	-
Fluoride	mg/kg	100	40,000	10,000	10,000	450	-	-	<100	-	-	-	-	-
Moisture Content (dried @ 103°C)	%	1					12	3.8	3.2	21	13	13	1.5	2.7
pH (1:5 aqueous extract)	-	0.1	≤2 or ≥12.5		<4 or >10		-	-	7.5	-	5.4	-	8.2	-
pH (Lab)	-	0.1	≤2 or ≥12.5		<4 or >10		-	-	-	-	-	-	-	-
Metals														
Iron (%)	%	0.01					-	-	-	-	-	-	-	-
Arsenic	mg/kg	2	2,000	500	500	20	26	6.7	2.8	18	53	2.5	7.4	4.5
Barium	mg/kg	10	25,000	6,250	6,250		-	54	-	-	250	-	640	-
Beryllium	mg/kg	2	400	100	100		-	<2	-	<2	<2	-	<2	-
Boron	mg/kg	10	60,000	15,000	15,000		-	<20	-	<20	26	-	<20	-
Cadmium	mg/kg	0.4	400	100	100	3	<0.4	<0.4	<0.4	<0.4	0.5	<0.4	<0.4	<0.4
Chromium (hexavalent)	mg/kg	1	2,000	500	500	1	-	-	<1	<1	-	-	-	-
Chromium (III+VI)	mg/kg	5					800	99	27	57	77	63	190	58
Cobalt	mg/kg	5					-	<5	-	17	24	-	<5	-
Copper	mg/kg	5	20,000	5,000	5,000	100	1,600	42	11	17	130	13	26	20
Iron	mg/kg	20					-	-	-	-	-	-	-	-
Lead	mg/kg	5	6,000	1,500	1,500	300	6,800	18	7.6	52	170	13	11	13
Manganese	mg/kg	5					-	1,000	-	260	770	-	6,500	-
Mercury	mg/kg	0.1	300	75	75	1	2.1	<0.1	<0.1	0.2	0.3	<0.1	<0.1	<0.1
Molybdenum	mg/kg	5	4,000	1,000	1,000	40	-	-	<5	-	-	-	-	-
Nickel	mg/kg	5	12,000	3,000	3,000	60	110	17	5.7	44	110	42	33	18
Selenium	mg/kg	2	40,000	10,000	10,000	10	-	<2	<2	<2	<2	-	<2	-
Silver	mg/kg	2	720	180	180	10	-	-	<2	<2	-	-	-	-
Tin	mg/kg	10					-	-	<10	-	-	-	-	-
Vanadium	mg/kg	10					-	15	-	-	52	-	19	-
Zinc	mg/kg	5	140,000	35,000	35,000	200	1,000	180	19	100	240	44	130	29
BTEX														
Naphthalene (VOC)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1	16	4	4	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	12,800	3,200	3,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	4,800	1,200	1,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2					<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3	9,600	2,400	2,400		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH														
C6-C9 Fraction	mg/kg	20	2,600	650	325	100	<20	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20					25	<20	<20	<20	<20	<20	<20	<20
C15-C28 Fraction	mg/kg	50					180	<50	<50	74	540	<50	<50	<50
C29-C36 Fraction	mg/kg	50					400	<50	<50	<50	250	<50	<50	<50
C10-C36 Fraction (Sum)	mg/kg	50	40,000	10,000	5,000	1,000	605	<50	<50	74	790	<50	<50	<50
C6-C10 Fraction (F1)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20
C6-C10 (F1 minus BTEX)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20
>C10-C16 Fraction (F2)	mg/kg	50					<50	<50	<50	<50	<50	<50	<50	<50
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50					<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 Fraction (F3)	mg/kg	100					510	<100	<100	130	720	<100	<100	<100
>C34-C40 Fraction (F4)	mg/kg	100					610	<100	<100	<100	100	<100	<100	<100
>C10-C40 Fraction (Sum)	mg/kg	100					1,120	<100	<100	130	820	<100	<100	<100
PAH														
Acenaphthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



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Environmental Site Assessment
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Analytical Results - 1828.2

			Field ID	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4	
			Domain	5	4	4	5	2	2	2	4	
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D / Fill material/upper	EPA Vic IWRG1828.2 Fill material/upper						
Acenaphthylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a) pyrene	mg/kg	0.5	160	40	20	1	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(b+j)fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(g,h,i)perylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(k)fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Chrysene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Dibenz(a,h)anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Fluorene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Naphthalene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Pyrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5					0.6	0.6	0.6	0.6	0.6	
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5					1.2	1.2	1.2	1.2	1.2	
PAHs (Sum of total)	mg/kg	0.5	400	100	50	20	<0.5	<0.5	<0.5	<0.5	<0.5	
PCBs												
Arochlor 1016	mg/kg	0.1					-	-	<0.1	<0.1	-	
Arochlor 1221	mg/kg	0.1					-	-	<0.1	<0.1	-	
Arochlor 1232	mg/kg	0.1					-	-	<0.1	<0.1	-	
Arochlor 1242	mg/kg	0.1					-	-	<0.1	<0.1	-	
Arochlor 1248	mg/kg	0.1					-	-	<0.1	<0.1	-	
Arochlor 1254	mg/kg	0.1					-	-	<0.1	<0.1	-	
Arochlor 1260	mg/kg	0.1					-	-	<0.1	<0.1	-	
PCBs (Sum of total)	mg/kg	0.1	*	50	2	2	-	-	<0.1	<0.1	-	
Phenols												
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4					-	-	<0.4	<0.4	-	
2,4,5-Trichlorophenol	mg/kg	1	64,000	16,000	16,000		-	-	<1	-	-	
2,4,6-Trichlorophenol	mg/kg	1	320	80	80		-	-	<1	-	-	
2,4-Dichlorophenol	mg/kg	0.5	3,200	800	800		-	-	<0.5	-	-	
2,4-Dimethylphenol	mg/kg	0.5					-	-	<0.5	-	-	
2,4-Dinitrophenol	mg/kg	5					-	-	<5	-	-	
2,6-Dichlorophenol	mg/kg	0.5					-	-	<0.5	-	-	
2-Chlorophenol	mg/kg	0.5	4,800	1,200	1,200		-	-	<0.5	-	-	
2-Methylphenol	mg/kg	0.2					-	-	<0.2	<0.2	-	
2-Nitrophenol	mg/kg	1					-	-	<1	-	-	
4,6-Dinitro-2-methylphenol	mg/kg	0.5					-	-	<5	-	-	
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20					-	-	<20	-	-	
4-chloro-3-methylphenol	mg/kg	1					-	-	<1	-	-	
4-Nitrophenol	mg/kg	5					-	-	<5	-	-	
Cresol Total	mg/kg	0.5	32,000	8,000	8,000		-	-	<0.5	-	-	
Pentachlorophenol	mg/kg	1					-	-	<1	-	-	
Picloram	mg/kg	0.5					-	-	<0.5	-	-	
Tetrachlorophenols	mg/kg	10					-	-	<10	-	-	
Phenol	mg/kg	0.5					-	-	<0.5	<0.5	-	
Phenols (Total Halogenated)	mg/kg	1				1	-	-	<1	-	-	
Phenols (Total Non Halogenated)	mg/kg	20	2,200	560	560	60	-	-	<20	-	-	
Particle Size												
% Clay*	%	1					-	-	-	-	-	
Other												
Actril (loxynil)	mg/kg	0.5					-	-	-	-	-	
Chlorinated Hydrocarbons												
Chlorinated hydrocarbons EPAVic	mg/kg	0.5				1	-	-	<0.5	-	-	



Table 1
Environmental Site Assessment
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			Field ID	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
			Domain	5	4	4	5	2	2	2	4
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D /	EPA Vic IWRG1828.2 Fill material/upper					
Other chlorinated hydrocarbons											
EPAVic	mg/kg	0.5					-	-	<0.5	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.5	1,600	400	400		-	-	<0.5	-	-
1,1,1-trichloroethane	mg/kg	0.5	4,800	1,200	1,200		-	-	<0.5	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5	210	52	52		-	-	<0.5	-	-
1,1,2-trichloroethane	mg/kg	0.5	190	48	48		-	-	<0.5	-	-
1,1-dichloroethane	mg/kg	0.5					-	-	<0.5	-	-
1,1-dichloroethene	mg/kg	0.5	480	120	120		-	-	<0.5	-	-
1,2,3-trichloropropane	mg/kg	0.5					-	-	<0.5	-	-
1,2-dichloroethane	mg/kg	0.5	48	12	12		-	-	<0.5	-	-
1,2-dichloropropane	mg/kg	0.5					-	-	<0.5	-	-
1,3-dichloropropane	mg/kg	0.5					-	-	<0.5	-	-
Bromochloromethane	mg/kg	0.5					-	-	<0.5	-	-
Bromodichloromethane	mg/kg	0.5					-	-	<0.5	-	-
Bromoform	mg/kg	0.5					-	-	<0.5	-	-
Carbon tetrachloride	mg/kg	0.5	48	12	12		-	-	<0.5	-	-
Chlorodibromomethane	mg/kg	0.5					-	-	<0.5	-	-
Chloroethane	mg/kg	0.5					-	-	<0.5	-	-
Chloroform	mg/kg	0.5	960	240	240		-	-	<0.5	-	-
Chloromethane	mg/kg	0.5					-	-	<0.5	-	-
cis-1,2-dichloroethene	mg/kg	0.5					-	-	<0.5	-	-
cis-1,3-dichloropropene	mg/kg	0.5					-	-	<0.5	-	-
Dibromomethane	mg/kg	0.5					-	-	<0.5	-	-
Dichloromethane	mg/kg	0.5	64	16	16		-	-	<0.5	-	-
Hexachlorobutadiene	mg/kg	0.5	11	2.8	2.8		-	-	<0.5	-	-
Trichloroethene	mg/kg	0.5	80	20	20		-	-	<0.5	-	-
Tetrachloroethene	mg/kg	0.5	800	200	200		-	-	<0.5	-	-
trans-1,2-dichloroethene	mg/kg	0.5					-	-	<0.5	-	-
trans-1,3-dichloropropene	mg/kg	0.5					-	-	<0.5	-	-
Vinyl chloride	mg/kg	0.5	4.8	1.2	1.2		-	-	<0.5	-	-
Halogenated Benzenes											
1,2,4-trichlorobenzene	mg/kg	0.05					-	-	<0.5	-	-
1,2-dichlorobenzene	mg/kg	0.5	24,000	6,000	6,000		-	-	<0.5	-	-
1,3-dichlorobenzene	mg/kg	0.5					-	-	<0.5	-	-
1,4-dichlorobenzene	mg/kg	0.5	640	160	160		-	-	<0.5	-	-
4-chlorotoluene	mg/kg	0.5					-	-	<0.5	-	-
Bromobenzene	mg/kg	0.5					-	-	<0.5	-	-
Chlorobenzene	mg/kg	0.5	4,800	1,200	1,200		-	-	<0.5	-	-
Hexachlorobenzene	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Halogenated Hydrocarbons											
1,2-dibromoethane	mg/kg	0.5					-	-	<0.5	-	-
Bromomethane	mg/kg	0.5					-	-	<0.5	-	-
Dichlorodifluoromethane	mg/kg	0.5					-	-	<0.5	-	-
Iodomethane	mg/kg	0.5					-	-	<0.5	-	-
Trichlorofluoromethane	mg/kg	0.5					-	-	<0.5	-	-
Herbicides											
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					-	-	<0.5	-	-
2,4,5-TP (Silvex)	mg/kg	0.5					-	-	<0.5	-	-
Hedonal	mg/kg	0.5	480	120	120		-	-	<0.5	-	-
2,4-Dichloroprop	mg/kg	0.5					-	-	<0.5	-	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5					-	-	<0.5	-	-
Atrazine	mg/kg	0.2					-	-	<0.2	-	-
Dicamba	mg/kg	0.5					-	-	<0.5	-	-
Dinoseb	mg/kg	0.5					-	-	<20	-	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					-	-	<0.5	-	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					-	-	<0.5	-	-



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			Field ID	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
			Domain	5	4	4	5	2	2	2	4
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D /	EPA Vic IWRG1828.2 Fill material/upper					
Mecoprop	mg/kg	0.5					<0.5	-	-	-	-
MAH						7					
Total MAH	mg/kg	0.5					-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.5					-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5					<0.5	-	-	-	-
Isopropylbenzene	mg/kg	0.5					-	-	-	-	-
Styrene	mg/kg	0.5	480	120	120		<0.5	-	-	-	-
Organochlorine Pesticides											
Organochlorine pesticides EPAVic	mg/kg	0.1				1	<0.1	-	<0.1	<0.1	<0.1
Other organochlorine pesticides											
EPAVic	mg/kg	0.1	50	10	10		<0.1	-	<0.1	<0.1	<0.1
4,4-DDE	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	4.8	1.2	1.2		<0.05	-	<0.05	<0.05	<0.05
b-BHC	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Chlordane	mg/kg	0.1	16	4	4		<0.1	-	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
DDD	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
DDT	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	50	50	50		<0.05	-	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Endrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	4.8	1.2	1.2		<0.05	-	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05
Toxaphene	mg/kg	0.5					<0.5	-	<0.5	<0.5	<0.5
Organic											
Total Organic Carbon	%						-	-	-	-	-
Organophosphorous Pesticides											
Tokuthion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Azinophos methyl	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2					<2	-	<2	<2	<2
Demeton-O	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
EPN	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
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				Field ID	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
				Domain	5	4	4	5	2	2	2	4
				Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
			EPA Vic IWRG1828.2 Category B upper	EPA Vic IWRG1828.2 Category C upper	EPA Vic IWRG1828.2 Category D / Industrial Waste	EPA Vic IWRG1828.2 Fill material upper						
Monocrotophos	mg/kg	2					<2	-	-	<2	-	<2
Naled (Dibrom)	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Omethoate	mg/kg	2					<2	-	-	<2	-	<2
Phorate	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Pyrazophos	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Ronnel	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Terbufos	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Trichloronate	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Tetrachlorvinphos	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Pesticides												
Bifenthrin	mg/kg	0.05					-	-	-	<0.05	-	-
Mirex	mg/kg	0.05					-	-	-	<0.05	-	-
Parathion	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Pirimiphos-methyl	mg/kg	0.2					<0.2	-	-	<0.2	-	<0.2
Solvents												
Methyl Ethyl Ketone	mg/kg	0.5	32,000	8,000	8,000		-	-	<0.5	-	-	-
4-Methyl-2-pentanone	mg/kg	0.5					-	-	<0.5	-	-	-
Acetone	mg/kg	0.5					-	-	<0.5	-	-	-
Allyl chloride	mg/kg	0.5					-	-	<0.5	-	-	-
Carbon disulfide	mg/kg	0.5					-	-	<0.5	-	-	-

Environmental Standards

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category B upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category C upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Fill material upper limit

*Refer to the Polychlorinated biphenyls management plan (2003, Australian and New Zealand Environment and Conservation Council (ANZECC))



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - 1828.2

	Unit	EQL	EPA Vic IWRG1828.2 Category B upper limit	EPA Vic IWRG1828.2 Category C upper limit	EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit	EPA Vic IWRG1828.2 Fill material upper limit	Field ID	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8
							Domain	3	1	5	5	1	1	1	5
							Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
Inorganics															
Conductivity (1:5 aqueous extract)	µS/cm	10					-	-	-	-	-	-	-	-	-
Cation Exchange Capacity	meq/100g	0.5					-	-	-	-	-	-	-	-	-
Cyanide (Free)	mg/kg	5					-	-	-	-	-	-	-	-	-
Cyanide Total	mg/kg	5	10,000	2,500	2,500	50	-	-	-	-	-	-	-	-	-
Fluoride	mg/kg	100	40,000	10,000	10,000	450	-	-	-	-	-	-	-	-	-
Moisture Content (dried @ 103°C)	%	1					9.4	13	23	15	5.7	8.1	16	15	
pH (1:5 aqueous extract)	-	0.1	≤2 or ≥12.5		<4 or >10		7.3	7.2	8.4	8.9	6.6	-	7.3	7.8	
pH (Lab)	-	0.1	≤2 or ≥12.5		<4 or >10		-	-	-	-	-	-	-	-	
Metals															
Iron (%)	%	0.01					-	-	-	-	-	-	-	-	-
Arsenic	mg/kg	2	2,000	500	500	20	4.6	7.0	24	23	64	30	15	12	
Barium	mg/kg	10	25,000	6,250	6,250		-	320	-	-	-	140	-	-	
Beryllium	mg/kg	2	400	100	100		-	<2	-	-	-	<20	-	-	
Boron	mg/kg	10	60,000	15,000	15,000		-	19	-	-	-	<100	-	-	
Cadmium	mg/kg	0.4	400	100	100	3	<0.4	<0.4	<0.4	4.2	45	7.9	<0.4	1.2	
Chromium (hexavalent)	mg/kg	1	2,000	500	500	1	-	-	-	-	-	-	-	-	
Chromium (III+VI)	mg/kg	5					50	50	73	45	340	87	53	45	
Cobalt	mg/kg	5					-	18	-	-	-	<50	-	-	
Copper	mg/kg	5	20,000	5,000	5,000	100	20	52	130	37	57,000	18,000	34	19	
Iron	mg/kg	20					-	-	-	-	-	-	-	-	
Lead	mg/kg	5	6,000	1,500	1,500	300	33	160	160	99	8,000	4,000	20	100	
Manganese	mg/kg	5					-	440	-	-	-	360	-	-	
Mercury	mg/kg	0.1	300	75	75	1	0.2	<0.1	0.9	<0.1	<1	<1	<0.1	1.4	
Molybdenum	mg/kg	5	4,000	1,000	1,000	40	-	-	-	-	-	-	-	-	
Nickel	mg/kg	5	12,000	3,000	3,000	60	29	49	120	45	500	160	41	35	
Selenium	mg/kg	2	40,000	10,000	10,000	10	-	<2	-	-	-	<20	-	-	
Silver	mg/kg	2	720	180	180	10	-	-	-	-	-	-	-	-	
Tin	mg/kg	10					-	-	-	-	-	-	-	-	
Vanadium	mg/kg	10					-	52	-	-	-	<100	-	-	
Zinc	mg/kg	5	140,000	35,000	35,000	200	56	630	300	4,500	19,000	3,300	80	120	
BTEX															
Naphthalene (VOC)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1	16	4	4	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	12,800	3,200	3,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Ethylbenzene	mg/kg	0.1	4,800	1,200	1,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Xylene (m & p)	mg/kg	0.2					<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Xylene (o)	mg/kg	0.1					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Xylene Total	mg/kg	0.3	9,600	2,400	2,400		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	
TRH															
C6-C9 Fraction	mg/kg	20	2,600	650	325	100	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20	<20
C15-C28 Fraction	mg/kg	50					<50	<50	260	140	<50	220	<50	66	
C29-C36 Fraction	mg/kg	50					<50	<50	310	120	<50	200	<50	60	
C10-C36 Fraction (Sum)	mg/kg	50	40,000	10,000	5,000	1,000	<50	<50	570	260	<50	420	<50	126	
C6-C10 Fraction (F1)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20	
C6-C10 (F1 minus BTEX)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20	<20	
>C10-C16 Fraction (F2)	mg/kg	50					<50	<50	<50	<50	<50	<50	<50	<50	
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50					<50	<50	<50	<50	<50	<50	<50	<50	
>C16-C34 Fraction (F3)	mg/kg	100					<100	<100	500	240	<100	340	<100	140	
>C34-C40 Fraction (F4)	mg/kg	100					<100	<100	100	<100	<100	180	<100	<100	
>C10-C40 Fraction (Sum)	mg/kg	100					<100	<100	600	240	<100	520	<100	140	
PAH															
Acenaphthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - 1828.2

			Field ID				BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8
			Domain				3	1	5	5	1	1	1	5
			Date				06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D / Fill material/upper	EPA Vic IWRG1828.2 Fill material/upper								
Acenaphthylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	
Benzo(a) pyrene	mg/kg	0.5	160	40	20	1	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	
Benzo(b+j)fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	
Benzo(g,h,i)perylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	
Benzo(k)fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chrysene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	
Dibenz(a,h)anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluoranthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	
Fluorene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Naphthalene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	
Pyrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5					0.6	0.6	0.6	0.6	1.5	0.6	0.6	
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5					1.2	1.2	1.2	1.2	1.8	1.2	1.2	
PAHs (Sum of total)	mg/kg	0.5	400	100	50	20	<0.5	<0.5	<0.5	<0.5	8.7	<0.5	<0.5	
PCBs														
Arochlor 1016	mg/kg	0.1					-	-	-	-	-	-	-	
Arochlor 1221	mg/kg	0.1					-	-	-	-	-	-	-	
Arochlor 1232	mg/kg	0.1					-	-	-	-	-	-	-	
Arochlor 1242	mg/kg	0.1					-	-	-	-	-	-	-	
Arochlor 1248	mg/kg	0.1					-	-	-	-	-	-	-	
Arochlor 1254	mg/kg	0.1					-	-	-	-	-	-	-	
Arochlor 1260	mg/kg	0.1					-	-	-	-	-	-	-	
PCBs (Sum of total)	mg/kg	0.1	*	50	2	2	-	-	-	-	-	-	-	
Phenols														
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4					-	-	-	-	-	-	-	
2,4,5-Trichlorophenol	mg/kg	1	64,000	16,000	16,000		-	-	-	-	-	-	-	
2,4,6-Trichlorophenol	mg/kg	1	320	80	80		-	-	-	-	-	-	-	
2,4-Dichlorophenol	mg/kg	0.5	3,200	800	800		-	-	-	-	-	-	-	
2,4-Dimethylphenol	mg/kg	0.5					-	-	-	-	-	-	-	
2,4-Dinitrophenol	mg/kg	5					-	-	-	-	-	-	-	
2,6-Dichlorophenol	mg/kg	0.5					-	-	-	-	-	-	-	
2-Chlorophenol	mg/kg	0.5	4,800	1,200	1,200		-	-	-	-	-	-	-	
2-Methylphenol	mg/kg	0.2					-	-	-	-	-	-	-	
2-Nitrophenol	mg/kg	1					-	-	-	-	-	-	-	
4,6-Dinitro-2-methylphenol	mg/kg	0.5					-	-	-	-	-	-	-	
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20					-	-	-	-	-	-	-	
4-chloro-3-methylphenol	mg/kg	1					-	-	-	-	-	-	-	
4-Nitrophenol	mg/kg	5					-	-	-	-	-	-	-	
Cresol Total	mg/kg	0.5	32,000	8,000	8,000		-	-	-	-	-	-	-	
Pentachlorophenol	mg/kg	1					-	-	-	-	-	-	-	
Picloram	mg/kg	0.5					-	-	-	-	-	-	-	
Tetrachlorophenols	mg/kg	10					-	-	-	-	-	-	-	
Phenol	mg/kg	0.5					-	-	-	-	-	-	-	
Phenols (Total Halogenated)	mg/kg	1				1	-	-	-	-	-	-	-	
Phenols (Total Non Halogenated)	mg/kg	20	2,200	560	560	60	-	-	-	-	-	-	-	
Particle Size														
% Clay*	%	1					-	-	-	-	-	-	-	
Other														
Actril (loxynil)	mg/kg	0.5					-	-	-	-	-	-	-	
Chlorinated Hydrocarbons														
Chlorinated hydrocarbons EPAVic	mg/kg	0.5				1	-	-	-	-	-	-	-	



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
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			Field ID	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8
			Domain	3	1	5	5	1	1	1	5
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D /	EPA Vic IWRG1828.2 Fill material/upper					
Other chlorinated hydrocarbons											
EPAVic	mg/kg	0.5					-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.5	1,600	400	400		-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5	4,800	1,200	1,200		-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5	210	52	52		-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5	190	48	48		-	-	-	-	-
1,1-dichloroethane	mg/kg	0.5					-	-	-	-	-
1,1-dichloroethene	mg/kg	0.5	480	120	120		-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5					-	-	-	-	-
1,2-dichloroethane	mg/kg	0.5	48	12	12		-	-	-	-	-
1,2-dichloropropane	mg/kg	0.5					-	-	-	-	-
1,3-dichloropropane	mg/kg	0.5					-	-	-	-	-
Bromochloromethane	mg/kg	0.5					-	-	-	-	-
Bromodichloromethane	mg/kg	0.5					-	-	-	-	-
Bromoform	mg/kg	0.5					-	-	-	-	-
Carbon tetrachloride	mg/kg	0.5	48	12	12		-	-	-	-	-
Chlorodibromomethane	mg/kg	0.5					-	-	-	-	-
Chloroethane	mg/kg	0.5					-	-	-	-	-
Chloroform	mg/kg	0.5	960	240	240		-	-	-	-	-
Chloromethane	mg/kg	0.5					-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5					-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5					-	-	-	-	-
Dibromomethane	mg/kg	0.5					-	-	-	-	-
Dichloromethane	mg/kg	0.5	64	16	16		-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5	11	2.8	2.8		-	-	-	-	-
Trichloroethene	mg/kg	0.5	80	20	20		-	-	-	-	-
Tetrachloroethene	mg/kg	0.5	800	200	200		-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5					-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5					-	-	-	-	-
Vinyl chloride	mg/kg	0.5	4.8	1.2	1.2		-	-	-	-	-
Halogenated Benzenes											
1,2,4-trichlorobenzene	mg/kg	0.05					-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5	24,000	6,000	6,000		-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5					-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5	640	160	160		-	-	-	-	-
4-chlorotoluene	mg/kg	0.5					-	-	-	-	-
Bromobenzene	mg/kg	0.5					-	-	-	-	-
Chlorobenzene	mg/kg	0.5	4,800	1,200	1,200		-	-	-	-	-
Hexachlorobenzene	mg/kg	0.05					-	-	<0.05	-	-
Halogenated Hydrocarbons											
1,2-dibromoethane	mg/kg	0.5					-	-	-	-	-
Bromomethane	mg/kg	0.5					-	-	-	-	-
Dichlorodifluoromethane	mg/kg	0.5					-	-	-	-	-
Iodomethane	mg/kg	0.5					-	-	-	-	-
Trichlorofluoromethane	mg/kg	0.5					-	-	-	-	-
Herbicides											
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					-	-	-	-	-
2,4,5-TP (Silvex)	mg/kg	0.5					-	-	-	-	-
Hedonal	mg/kg	0.5	480	120	120		-	-	-	-	-
2,4-Dichlorprop	mg/kg	0.5					-	-	-	-	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5					-	-	-	-	-
Atrazine	mg/kg	0.2					-	-	-	-	-
Dicamba	mg/kg	0.5					-	-	-	-	-
Dinoseb	mg/kg	0.5					-	-	-	-	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					-	-	-	-	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					-	-	-	-	-



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - 1828.2

			Field ID	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8
			Domain	3	1	5	5	1	1	1	5
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D /	EPA Vic IWRG1828.2 Fill material/upper					
Mecoprop	mg/kg	0.5					-	-	-	-	-
MAH											
Total MAH	mg/kg	0.5				7	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.5					-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5					-	-	-	-	-
Isopropylbenzene	mg/kg	0.5					-	-	-	-	-
Styrene	mg/kg	0.5	480	120	120		-	-	-	-	-
Organochlorine Pesticides											
Organochlorine pesticides EPAVic	mg/kg	0.1				1	-	-	<0.1	-	-
Other organochlorine pesticides											
EPAVic	mg/kg	0.1	50	10	10		-	-	<0.1	-	-
4,4-DDE	mg/kg	0.05					-	-	<0.05	-	-
a-BHC	mg/kg	0.05					-	-	<0.05	-	-
Aldrin	mg/kg	0.05					-	-	<0.05	-	-
Aldrin + Dieldrin	mg/kg	0.05	4.8	1.2	1.2		-	-	<0.05	-	-
b-BHC	mg/kg	0.05					-	-	<0.05	-	-
Chlordane	mg/kg	0.1	16	4	4		-	-	<0.1	-	-
d-BHC	mg/kg	0.05					-	-	<0.05	-	-
DDD	mg/kg	0.05					-	-	<0.05	-	-
DDT	mg/kg	0.05					-	-	<0.05	-	-
DDT+DDE+DDD	mg/kg	0.05	50	50	50		-	-	<0.05	-	-
Dieldrin	mg/kg	0.05					-	-	<0.05	-	-
Endosulfan I	mg/kg	0.05					-	-	<0.05	-	-
Endosulfan II	mg/kg	0.05					-	-	<0.05	-	-
Endosulfan sulphate	mg/kg	0.05					-	-	<0.05	-	-
Endrin	mg/kg	0.05					-	-	<0.05	-	-
Endrin aldehyde	mg/kg	0.05					-	-	<0.05	-	-
Endrin ketone	mg/kg	0.05					-	-	<0.05	-	-
g-BHC (Lindane)	mg/kg	0.05					-	-	<0.05	-	-
Heptachlor	mg/kg	0.05	4.8	1.2	1.2		-	-	<0.05	-	-
Heptachlor epoxide	mg/kg	0.05					-	-	<0.05	-	-
Methoxychlor	mg/kg	0.05					-	-	<0.05	-	-
Toxaphene	mg/kg	0.5					-	-	<0.5	-	-
Organic											
Total Organic Carbon	%						-	-	-	-	-
Organophosphorous Pesticides											
Tokuthion	mg/kg	0.2					-	-	<0.2	-	-
Azinophos methyl	mg/kg	0.2					-	-	<0.2	-	-
Bolstar (Sulprofos)	mg/kg	0.2					-	-	<0.2	-	-
Chlorfenvinphos	mg/kg	0.2					-	-	<0.2	-	-
Chlorpyrifos	mg/kg	0.2					-	-	<0.2	-	-
Chlorpyrifos-methyl	mg/kg	0.2					-	-	<0.2	-	-
Coumaphos	mg/kg	2					-	-	<2	-	-
Demeton-O	mg/kg	0.2					-	-	<0.2	-	-
Demeton-S	mg/kg	0.2					-	-	<0.2	-	-
Diazinon	mg/kg	0.2					-	-	<0.2	-	-
Dichlorvos	mg/kg	0.2					-	-	<0.2	-	-
Dimethoate	mg/kg	0.2					-	-	<0.2	-	-
Disulfoton	mg/kg	0.2					-	-	<0.2	-	-
Ethion	mg/kg	0.2					-	-	<0.2	-	-
Ethoprop	mg/kg	0.2					-	-	<0.2	-	-
Fenitrothion	mg/kg	0.2					-	-	<0.2	-	-
Fensulfothion	mg/kg	0.2					-	-	<0.2	-	-
Fenthion	mg/kg	0.2					-	-	<0.2	-	-
EPN	mg/kg	0.2					-	-	<0.2	-	-
Malathion	mg/kg	0.2					-	-	<0.2	-	-
Merphos	mg/kg	0.2					-	-	<0.2	-	-
Methyl parathion	mg/kg	0.2					-	-	<0.2	-	-
Mevinphos (Phosdrin)	mg/kg	0.2					-	-	<0.2	-	-



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Environmental Site Assessment
43 The Boulevard, Norlane
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				Field ID	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8	
				Domain	3	1	5	5	1	1	1	5	
				Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	
			EPA Vic IWRG1828.2 Category B upper	EPA Vic IWRG1828.2 Category C upper	EPA Vic IWRG1828.2 Category D / Industrial Waste	EPA Vic IWRG1828.2 Fill material upper							
Monocrotophos	mg/kg	2					-	-	<2	-	<2	-	-
Naled (Dibrom)	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Omethoate	mg/kg	2					-	-	<2	-	<2	-	-
Phorate	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Pyrazophos	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Ronnel	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Terbufos	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Trichloronate	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Tetrachlorvinphos	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Pesticides													
Bifenthrin	mg/kg	0.05					-	-	-	-	-	-	-
Mirex	mg/kg	0.05					-	-	-	-	-	-	-
Parathion	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Pirimiphos-methyl	mg/kg	0.2					-	-	<0.2	-	<0.2	-	-
Solvents													
Methyl Ethyl Ketone	mg/kg	0.5	32,000	8,000	8,000		-	-	-	-	-	-	-
4-Methyl-2-pentanone	mg/kg	0.5					-	-	-	-	-	-	-
Acetone	mg/kg	0.5					-	-	-	-	-	-	-
Allyl chloride	mg/kg	0.5					-	-	-	-	-	-	-
Carbon disulfide	mg/kg	0.5					-	-	-	-	-	-	-

Environmental Standards

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category B upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category C upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Fill material upper limit

*Refer to the Polychlorinated biphenyls management plan (2003, Australian and New Zealand Environment and Conservation Council (ANZECC))



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - 1828.2

	Unit	EQL	EPA Vic IWRG1828.2 Category B upper limit	EPA Vic IWRG1828.2 Category C upper limit	EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit	EPA Vic IWRG1828.2 Fill material upper limit	Field ID	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3	BH14_0.15	BH15_0.1
							Domain	5	1	1	1	1	1
							Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
Inorganics													
Conductivity (1:5 aqueous extract)	µS/cm	10					-	-	-	-	-	-	-
Cation Exchange Capacity	meq/100g	0.5					-	-	-	-	-	-	-
Cyanide (Free)	mg/kg	5					<5	-	<5	-	<5	-	-
Cyanide Total	mg/kg	5	10,000	2,500	2,500	50	-	-	-	<5	<5	-	-
Fluoride	mg/kg	100	40,000	10,000	10,000	450	-	-	-	<100	<100	-	-
Moisture Content (dried @ 103°C)	%	1					20	13	10	6.7	8.1	8.9	
pH (1:5 aqueous extract)	-	0.1	≤2 or ≥12.5		<4 or >10		-	3.8	-	8.1	8.1	8.4	
pH (Lab)	-	0.1	≤2 or ≥12.5		<4 or >10		-	-	-	-	-	-	
Metals													
Iron (%)	%	0.01					-	-	-	-	-	-	-
Arsenic	mg/kg	2	2,000	500	500	20	38	57	4.9	31	12	7.0	
Barium	mg/kg	10	25,000	6,250	6,250		-	-	-	-	200	-	
Beryllium	mg/kg	2	400	100	100		<2	-	<2	-	<2	-	
Boron	mg/kg	10	60,000	15,000	15,000		43	-	<20	-	-	-	
Cadmium	mg/kg	0.4	400	100	100	3	<0.4	<0.4	<0.4	<0.4	1.2	<0.4	
Chromium (hexavalent)	mg/kg	1	2,000	500	500	1	<1	-	<1	<1	<1	-	
Chromium (III+VI)	mg/kg	5					44	270	45	120	52	41	
Cobalt	mg/kg	5					18	-	14	-	12	-	
Copper	mg/kg	5	20,000	5,000	5,000	100	130	190	10	94	71	38	
Iron	mg/kg	20					-	-	-	-	-	-	
Lead	mg/kg	5	6,000	1,500	1,500	300	2,600	70	8.4	45	110	150	
Manganese	mg/kg	5					460	-	260	-	490	-	
Mercury	mg/kg	0.1	300	75	75	1	0.9	0.2	<0.1	<0.1	0.2	<0.1	
Molybdenum	mg/kg	5	4,000	1,000	1,000	40	-	-	-	6.2	6.5	-	
Nickel	mg/kg	5	12,000	3,000	3,000	60	58	170	28	70	42	29	
Selenium	mg/kg	2	40,000	10,000	10,000	10	<2	-	<2	<2	<2	-	
Silver	mg/kg	2	720	180	180	10	-	-	-	<2	<2	-	
Tin	mg/kg	10				50	-	-	-	530	24	-	
Vanadium	mg/kg	10					-	-	-	-	-	-	
Zinc	mg/kg	5	140,000	35,000	35,000	200	310	690	17	55	210	120	
BTEX													
Naphthalene (VOC)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1	16	4	4	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	12,800	3,200	3,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	4,800	1,200	1,200		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2					<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3	9,600	2,400	2,400		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH													
C6-C9 Fraction	mg/kg	20	2,600	650	325	100	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20					40	59	<20	25	<20	<20	<20
C15-C28 Fraction	mg/kg	50					630	260	<50	220	<50	<50	<50
C29-C36 Fraction	mg/kg	50					550	210	<50	84	67	<50	<50
C10-C36 Fraction (Sum)	mg/kg	50	40,000	10,000	5,000	1,000	1,220	529	<50	329	67	<50	<50
C6-C10 Fraction (F1)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20
C6-C10 (F1 minus BTEX)	mg/kg	20					<20	<20	<20	<20	<20	<20	<20
>C10-C16 Fraction (F2)	mg/kg	50					56	75	<50	<50	<50	<50	<50
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50					56	75	<50	<50	<50	<50	<50
>C16-C34 Fraction (F3)	mg/kg	100					1,100	360	<100	270	<100	<100	<100
>C34-C40 Fraction (F4)	mg/kg	100					310	140	<100	<100	<100	<100	<100
>C10-C40 Fraction (Sum)	mg/kg	100					1,466	575	<100	270	<100	<100	<100
PAH													
Acenaphthene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Table 1
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - 1828.2

			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D / Fill material/upper	EPA Vic IWRG1828.2 Fill material/upper	Field ID	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3	BH14_0.15	BH15_0.1
							Domain	5	1	1	1	1	1
							Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
Acenaphthylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5					0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	mg/kg	0.5					0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a) pyrene	mg/kg	0.5	160	40	20	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5					0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5					0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	mg/kg	0.5					0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5					0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5					0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5					1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5					0.8	0.6	0.6	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5					1.3	1.2	1.2	1.2	1.2	1.2	1.2
PAHs (Sum of total)	mg/kg	0.5	400	100	50	20	6.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PCBs													
Arochlor 1016	mg/kg	0.1					<0.1	-	<0.1	<0.1	<0.1	<0.1	-
Arochlor 1221	mg/kg	0.1					<0.1	-	<0.1	<0.1	<0.1	<0.1	-
Arochlor 1232	mg/kg	0.1					<0.1	-	<0.1	<0.1	<0.1	<0.1	-
Arochlor 1242	mg/kg	0.1					<0.1	-	<0.1	<0.1	<0.1	<0.1	-
Arochlor 1248	mg/kg	0.1					<0.1	-	<0.1	<0.1	<0.1	<0.1	-
Arochlor 1254	mg/kg	0.1					<0.1	-	<0.1	<0.1	<0.1	<0.1	-
Arochlor 1260	mg/kg	0.1					<0.1	-	<0.1	<0.1	<0.1	<0.1	-
PCBs (Sum of total)	mg/kg	0.1	*	50	2	2	<0.1	-	<0.1	<0.1	<0.1	<0.1	-
Phenols													
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4					<0.4	-	<0.4	<0.4	<0.4	<0.4	-
2,4,5-Trichlorophenol	mg/kg	1	64,000	16,000	16,000		-	-	-	<1	<1	<1	-
2,4,6-Trichlorophenol	mg/kg	1	320	80	80		-	-	-	<1	<1	<1	-
2,4-Dichlorophenol	mg/kg	0.5	3,200	800	800		-	-	-	<0.5	<0.5	<0.5	-
2,4-Dimethylphenol	mg/kg	0.5					-	-	-	<0.5	<0.5	<0.5	-
2,4-Dinitrophenol	mg/kg	5					-	-	-	<5	<5	<5	-
2,6-Dichlorophenol	mg/kg	0.5					-	-	-	<0.5	<0.5	<0.5	-
2-Chlorophenol	mg/kg	0.5	4,800	1,200	1,200		-	-	-	<0.5	<0.5	<0.5	-
2-Methylphenol	mg/kg	0.2					<0.2	-	<0.2	<0.2	<0.2	<0.2	-
2-Nitrophenol	mg/kg	1					-	-	-	<1	<1	<1	-
4,6-Dinitro-2-methylphenol	mg/kg	0.5					-	-	-	<5	<0.5	<0.5	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20					-	-	-	<20	<20	<20	-
4-chloro-3-methylphenol	mg/kg	1					-	-	-	<1	<1	<1	-
4-Nitrophenol	mg/kg	5					-	-	-	<5	<5	<5	-
Cresol Total	mg/kg	0.5	32,000	8,000	8,000		-	-	-	<0.5	<0.5	<0.5	-
Pentachlorophenol	mg/kg	1					<1	-	<1	<1	<1	<1	-
Picloram	mg/kg	0.5					<0.5	-	<0.5	-	-	-	-
Tetrachlorophenols	mg/kg	10					-	-	-	<10	<10	<10	-
Phenol	mg/kg	0.5					<0.5	-	<0.5	<0.5	<0.5	<0.5	-
Phenols (Total Halogenated)	mg/kg	1				1	-	-	-	<1	<1	<1	-
Phenols (Total Non Halogenated)	mg/kg	20	2,200	560	560	60	-	-	-	<20	<20	<20	-
Particle Size													
% Clay*	%	1					-	-	-	-	-	-	-
Other													
Actril (loxynil)	mg/kg	0.5					-	-	-	-	<0.5	<0.5	-
Chlorinated Hydrocarbons													
Chlorinated hydrocarbons EPAVic	mg/kg	0.5				1	-	-	-	<0.5	<0.5	<0.5	-



Table 1
Environmental Site Assessment
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			Field ID	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3	BH14_0.15	BH15_0.1	
			Domain	5	1	1	1	1	1	
			Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	
			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D /	EPA Vic IWRG1828.2 Fill material/upper				
Other chlorinated hydrocarbons										
EPA Vic	mg/kg	0.5					-	<0.5	<0.5	-
1,1,1,2-tetrachloroethane	mg/kg	0.5	1,600	400	400		-	<0.5	<0.5	-
1,1,1-trichloroethane	mg/kg	0.5	4,800	1,200	1,200		-	<0.5	<0.5	-
1,1,2,2-tetrachloroethane	mg/kg	0.5	210	52	52		-	<0.5	<0.5	-
1,1,2-trichloroethane	mg/kg	0.5	190	48	48		-	<0.5	<0.5	-
1,1-dichloroethane	mg/kg	0.5					-	<0.5	<0.5	-
1,1-dichloroethene	mg/kg	0.5	480	120	120		-	<0.5	<0.5	-
1,2,3-trichloropropane	mg/kg	0.5					-	<0.5	<0.5	-
1,2-dichloroethane	mg/kg	0.5	48	12	12		-	<0.5	<0.5	-
1,2-dichloropropane	mg/kg	0.5					-	<0.5	<0.5	-
1,3-dichloropropane	mg/kg	0.5					-	<0.5	<0.5	-
Bromochloromethane	mg/kg	0.5					-	<0.5	<0.5	-
Bromodichloromethane	mg/kg	0.5					-	<0.5	<0.5	-
Bromoform	mg/kg	0.5					-	<0.5	<0.5	-
Carbon tetrachloride	mg/kg	0.5	48	12	12		-	<0.5	<0.5	-
Chlorodibromomethane	mg/kg	0.5					-	<0.5	<0.5	-
Chloroethane	mg/kg	0.5					-	<0.5	<0.5	-
Chloroform	mg/kg	0.5	960	240	240		-	<0.5	<0.5	-
Chloromethane	mg/kg	0.5					-	<0.5	<0.5	-
cis-1,2-dichloroethene	mg/kg	0.5					-	<0.5	<0.5	-
cis-1,3-dichloropropene	mg/kg	0.5					-	<0.5	<0.5	-
Dibromomethane	mg/kg	0.5					-	<0.5	<0.5	-
Dichloromethane	mg/kg	0.5	64	16	16		-	<0.5	<0.5	-
Hexachlorobutadiene	mg/kg	0.5	11	2.8	2.8		-	<0.5	<0.5	-
Trichloroethene	mg/kg	0.5	80	20	20		-	<0.5	<0.5	-
Tetrachloroethene	mg/kg	0.5	800	200	200		-	<0.5	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.5					-	<0.5	<0.5	-
trans-1,3-dichloropropene	mg/kg	0.5					-	<0.5	<0.5	-
Vinyl chloride	mg/kg	0.5	4.8	1.2	1.2		-	<0.5	<0.5	-
Halogenated Benzenes										
1,2,4-trichlorobenzene	mg/kg	0.05					-	<0.5	<0.05	-
1,2-dichlorobenzene	mg/kg	0.5	24,000	6,000	6,000		-	<0.5	<0.5	-
1,3-dichlorobenzene	mg/kg	0.5					-	<0.5	<0.5	-
1,4-dichlorobenzene	mg/kg	0.5	640	160	160		-	<0.5	<0.5	-
4-chlorotoluene	mg/kg	0.5					-	<0.5	<0.5	-
Bromobenzene	mg/kg	0.5					-	<0.5	<0.5	-
Chlorobenzene	mg/kg	0.5	4,800	1,200	1,200		-	<0.5	<0.5	-
Hexachlorobenzene	mg/kg	0.05					<0.05	-	<0.05	-
Halogenated Hydrocarbons										
1,2-dibromoethane	mg/kg	0.5					-	<0.5	<0.5	-
Bromomethane	mg/kg	0.5					-	<0.5	<0.5	-
Dichlorodifluoromethane	mg/kg	0.5					-	<0.5	<0.5	-
Iodomethane	mg/kg	0.5					-	<0.5	<0.5	-
Trichlorofluoromethane	mg/kg	0.5					-	<0.5	<0.5	-
Herbicides										
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					<0.5	-	<0.5	-
2,4,5-TP (Silvex)	mg/kg	0.5					-	-	<0.5	-
Hedonal	mg/kg	0.5	480	120	120		<0.5	-	<0.5	-
2,4-Dichlorprop	mg/kg	0.5					-	-	<0.5	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5					-	-	<0.5	-
Atrazine	mg/kg	0.2					<0.2	-	<0.2	-
Dicamba	mg/kg	0.5					-	-	<0.5	-
Dinoseb	mg/kg	0.5					-	<20	<0.5	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					<0.5	-	<0.5	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					<0.5	-	<0.5	-



Table 1
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			EPA Vic IWRG1828.2 Category B/upper	EPA Vic IWRG1828.2 Category C/upper	EPA Vic IWRG1828.2 Category D / Category E/upper	EPA Vic IWRG1828.2 Fill material/upper	Field ID	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3	BH14_0.15	BH15_0.1
							Domain	5	1	1	1	1	1
							Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
Mecoprop	mg/kg	0.5					<0.5	-	<0.5	-	<0.5	-	
MAH													
Total MAH	mg/kg	0.5				7	-	-	-	<0.5	<0.5	-	
1,2,4-trimethylbenzene	mg/kg	0.5					-	-	-	<0.5	<0.5	-	
1,3,5-trimethylbenzene	mg/kg	0.5					-	-	-	<0.5	<0.5	-	
Isopropylbenzene	mg/kg	0.5					-	-	-	<0.5	<0.5	-	
Styrene	mg/kg	0.5	480	120	120		-	-	-	<0.5	<0.5	-	
Organochlorine Pesticides													
Organochlorine pesticides EPAVic	mg/kg	0.1				1	-	-	-	<0.1	<0.1	-	
Other organochlorine pesticides													
EPAVic	mg/kg	0.1	50	10	10		-	-	-	<0.1	<0.1	-	
4,4-DDE	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
a-BHC	mg/kg	0.05					-	-	-	<0.05	<0.05	-	
Aldrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
Aldrin + Dieldrin	mg/kg	0.05	4.8	1.2	1.2		<0.05	-	<0.05	<0.05	<0.05	-	
b-BHC	mg/kg	0.05					-	-	-	<0.05	<0.05	-	
Chlordane	mg/kg	0.1	16	4	4		<0.1	-	<0.1	<0.1	<0.1	-	
d-BHC	mg/kg	0.05					-	-	-	<0.05	<0.05	-	
DDD	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
DDT	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
DDT+DDE+DDD	mg/kg	0.05	50	50	50		<0.05	-	<0.05	<0.05	<0.05	-	
Dieldrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
Endosulfan I	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
Endosulfan II	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
Endosulfan sulphate	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
Endrin	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
Endrin aldehyde	mg/kg	0.05					-	-	-	<0.05	<0.05	-	
Endrin ketone	mg/kg	0.05					-	-	-	<0.05	<0.05	-	
g-BHC (Lindane)	mg/kg	0.05					-	-	-	<0.05	<0.05	-	
Heptachlor	mg/kg	0.05	4.8	1.2	1.2		<0.05	-	<0.05	<0.05	<0.05	-	
Heptachlor epoxide	mg/kg	0.05					-	-	-	<0.05	<0.05	-	
Methoxychlor	mg/kg	0.05					<0.05	-	<0.05	<0.05	<0.05	-	
Toxaphene	mg/kg	0.5					<0.5	-	<0.5	<0.5	<0.5	-	
Organic													
Total Organic Carbon	%						-	-	-	-	-	-	
Organophosphorous Pesticides													
Tokuthion	mg/kg	0.2					-	-	-	-	-	-	
Azinophos methyl	mg/kg	0.2					-	-	-	-	-	-	
Bolstar (Sulprofos)	mg/kg	0.2					-	-	-	-	-	-	
Chlorfenvinphos	mg/kg	0.2					-	-	-	-	-	-	
Chlorpyrifos	mg/kg	0.2					<0.2	-	<0.2	-	<0.2	-	
Chlorpyrifos-methyl	mg/kg	0.2					-	-	-	-	-	-	
Coumaphos	mg/kg	2					-	-	-	-	-	-	
Demeton-O	mg/kg	0.2					-	-	-	-	-	-	
Demeton-S	mg/kg	0.2					-	-	-	-	-	-	
Diazinon	mg/kg	0.2					-	-	-	-	-	-	
Dichlorvos	mg/kg	0.2					-	-	-	-	-	-	
Dimethoate	mg/kg	0.2					-	-	-	-	-	-	
Disulfoton	mg/kg	0.2					-	-	-	-	-	-	
Ethion	mg/kg	0.2					-	-	-	-	-	-	
Ethoprop	mg/kg	0.2					-	-	-	-	-	-	
Fenitrothion	mg/kg	0.2					-	-	-	-	-	-	
Fensulfothion	mg/kg	0.2					-	-	-	-	-	-	
Fenthion	mg/kg	0.2					-	-	-	-	-	-	
EPN	mg/kg	0.2					-	-	-	-	-	-	
Malathion	mg/kg	0.2					-	-	-	-	-	-	
Merphos	mg/kg	0.2					-	-	-	-	-	-	
Methyl parathion	mg/kg	0.2					-	-	-	-	-	-	
Mevinphos (Phosdrin)	mg/kg	0.2					-	-	-	-	-	-	



Table 1
 Environmental Site Assessment
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 Analytical Results - 1828.2

			Field ID	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3	BH14_0.15	BH15_0.1	
			Domain	5	1	1	1	1	1	
			Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	
			EPA Vic IWRG1828.2 Category B upper	EPA Vic IWRG1828.2 Category C upper	EPA Vic IWRG1828.2 Category D / Industrial Waste upper	EPA Vic IWRG1828.2 Fill material upper				
Monocrotophos	mg/kg	2					-	-	-	-
Naled (Dibrom)	mg/kg	0.2					-	-	-	-
Omethoate	mg/kg	2					-	-	-	-
Phorate	mg/kg	0.2					-	-	-	-
Pyrazophos	mg/kg	0.2					-	-	-	-
Ronnel	mg/kg	0.2					-	-	-	-
Terbufos	mg/kg	0.2					-	-	-	-
Trichloronate	mg/kg	0.2					-	-	-	-
Tetrachlorvinphos	mg/kg	0.2					-	-	-	-
Pesticides										
Bifenthrin	mg/kg	0.05					<0.05	-	<0.05	-
Mirex	mg/kg	0.05					<0.05	-	-	-
Parathion	mg/kg	0.2					-	-	-	-
Pirimiphos-methyl	mg/kg	0.2					-	-	-	-
Solvents										
Methyl Ethyl Ketone	mg/kg	0.5	32,000	8,000	8,000		-	-	<0.5	<0.5
4-Methyl-2-pentanone	mg/kg	0.5					-	-	<0.5	<0.5
Acetone	mg/kg	0.5					-	-	<0.5	<0.5
Allyl chloride	mg/kg	0.5					-	-	<0.5	<0.5
Carbon disulfide	mg/kg	0.5					-	-	<0.5	<0.5

Environmental Standards

EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category B upper limit
 EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category C upper limit
 EPA Victoria, July 2021, EPA Vic IWRG1828.2 Category D / Industrial Waste upper limit
 EPA Victoria, July 2021, EPA Vic IWRG1828.2 Fill material upper limit

*Refer to the Polychlorinated biphenyls management plan (2003, Australian and New Zealand Environment and Conservation Council (ANZECC))



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3
								Domain	4	5	7	1	5	N/A	1
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
Inorganics															
Conductivity (1:5 aqueous extract)	µS/cm	10						-	-	-	-	-	-	-	-
Cation Exchange Capacity	meq/100g	0.5						-	-	-	-	-	-	-	-
Cyanide (Free)	mg/kg	5					1,500	-	-	-	<5	-	-	-	-
Cyanide Total	mg/kg	5						-	-	-	<5	-	-	-	-
Fluoride	mg/kg	100						-	-	-	<100	-	-	-	-
Moisture Content (dried @ 103°C)	%	1						1.3	10	13	3.8	14	2.5	10	
pH (1:5 aqueous extract)	-	0.1						8.3	7.6	-	7.7	7.5	-	6.8	
pH (Lab)	-	0.1						-	-	-	-	-	-	-	
Metals															
Iron (%)	%	0.01						-	-	-	-	-	-	-	-
Arsenic	mg/kg	2			160		3,000	3.8	32	100	7.1	8.6	<2	170	
Barium	mg/kg	10						-	160	-	47	-	-	110	
Beryllium	mg/kg	2					500	-	<2	-	<2	-	-	3.2	
Boron	mg/kg	10					300,000	-	<20	-	-	-	-	<20	
Cadmium	mg/kg	0.4					900	<0.4	0.5	<0.4	0.8	<0.4	<0.4	<0.4	
Chromium (hexavalent)	mg/kg	1					3,600	-	-	-	<1	-	-	-	
Chromium (III+VI)	mg/kg	5			490 ¹			53	95	37	34	63	<5	86	
Cobalt	mg/kg	5					4,000	-	14	-	<5	-	-	26	
Copper	mg/kg	5			170 ¹		240,000	15	83	6.0	66	39	66	6.2	
Iron	mg/kg	20						-	-	-	-	-	-	-	
Lead	mg/kg	5					1,500	12	89	6.8	71	17	9.8	11	
Manganese	mg/kg	5					60,000	-	460	-	380	-	-	160	
Mercury	mg/kg	0.1					730	0.1	4.0	<0.1	<0.1	<0.1	<0.1	<0.1	
Molybdenum	mg/kg	5						-	-	-	<5	-	-	-	
Nickel	mg/kg	5			450 ¹		6,000	12	30	16	19	62	11	52	
Selenium	mg/kg	2					10,000	-	<2	-	<2	-	-	2.1	
Silver	mg/kg	2						-	-	-	<2	-	-	-	
Tin	mg/kg	10						-	-	-	<10	-	-	-	
Vanadium	mg/kg	10						-	68	-	-	-	-	400	
Zinc	mg/kg	5			1,100 ¹		400,000	44	450	25	140	150	59	37	
BTEX															
Naphthalene (VOC)	mg/kg	0.5			370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1		4 4 6 10		95		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1				135		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1				185		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2						<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1						<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3				95		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH															
C6-C9 Fraction	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20
C15-C28 Fraction	mg/kg	50						<50	910	<50	57	<50	<50	<50	
C29-C36 Fraction	mg/kg	50						<50	170	<50	<50	<50	<50	<50	
C10-C36 Fraction (Sum)	mg/kg	50						<50	1,080	<50	57	<50	<50	<50	
C6-C10 Fraction (F1)	mg/kg	20	800					<20	<20	<20	<20	<20	<20	<20	
C6-C10 (F1 minus BTEX)	mg/kg	20		250 360 590		215		<20	<20	<20	<20	<20	<20	<20	
>C10-C16 Fraction (F2)	mg/kg	50	1,000			170		<50	<50	<50	<50	<50	<50	<50	
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50				170		<50	<50	<50	<50	<50	<50	<50	
>C16-C34 Fraction (F3)	mg/kg	100	5,000			2,500		<100	1,300	<100	<100	<100	<100	<100	
>C34-C40 Fraction (F4)	mg/kg	100	10,000			6,600		<100	<100	<100	<100	<100	<100	<100	



Table 2
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Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3
								Domain	4	5	7	1	5	N/A	1
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
>C10-C40 Fraction (Sum)	mg/kg	100						<100	1,300	<100	<100	<100	<100	<100	<100
PAHs															
Acenaphthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a) pyrene	mg/kg	0.5				1.4		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	mg/kg	0.5			370		1,100 ³	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5			172 ³		40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5			172 ³		40	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5			172 ³		40	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PAHs (Sum of total)	mg/kg	0.5					4,000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PCBs															
Arochlor 1016	mg/kg	0.1						-	-	-	<0.1	-	-	-	-
Arochlor 1221	mg/kg	0.1						-	-	-	<0.1	-	-	-	-
Arochlor 1232	mg/kg	0.1						-	-	-	<0.1	-	-	-	-
Arochlor 1242	mg/kg	0.1						-	-	-	<0.1	-	-	-	-
Arochlor 1248	mg/kg	0.1						-	-	-	<0.1	-	-	-	-
Arochlor 1254	mg/kg	0.1						-	-	-	<0.1	-	-	-	-
Arochlor 1260	mg/kg	0.1						-	-	-	<0.1	-	-	-	-
PCBs (Sum of total)	mg/kg	0.1					7	-	-	-	<0.1	-	-	-	-
Phenols															
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4						-	-	-	<0.4	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	1						-	-	-	<1	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	1						-	-	-	<1	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
2,4-Dinitrophenol	mg/kg	5						-	-	-	<5	-	-	-	-
2,6-Dichlorophenol	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
2-Chlorophenol	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
2-Methylphenol	mg/kg	0.2						-	-	-	<0.2	-	-	-	-
2-Nitrophenol	mg/kg	1						-	-	-	<1	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20						-	-	-	<20	-	-	-	-
4-chloro-3-methylphenol	mg/kg	1						-	-	-	<1	-	-	-	-
4-Nitrophenol	mg/kg	5						-	-	-	<5	-	-	-	-
Cresol Total	mg/kg	0.5					25,000	-	-	-	<0.5	-	-	-	-
Pentachlorophenol	mg/kg	1					660	-	-	-	<1	-	-	-	-
Picloram	mg/kg	0.5					35,000	-	-	-	-	-	-	-	-
Tetrachlorophenols	mg/kg	10						-	-	-	<10	-	-	-	-
Phenol	mg/kg	0.5					240,000	-	-	-	<0.5	-	-	-	-
Phenols (Total Halogenated)	mg/kg	1						-	-	-	<1	-	-	-	-



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								Domain	4	5	7	1	5	N/A	1
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
Phenols (Total Non Halogenated)	mg/kg	20						-	-	-	<20	-	-	-	-
Particle Size															
% Clay*	%	1						-	-	-	-	-	-	-	-
Other															
Actril (Ioxnyl)	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Chlorinated Hydrocarbons															
Chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Other chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,1-dichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,1-dichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,2-dichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,2-dichloropropane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,3-dichloropropane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Bromochloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Bromodichloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Bromoform	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Carbon tetrachloride	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Chlorodibromomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Chloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Chloroform	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Chloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Dibromomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Dichloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Trichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Tetrachloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Vinyl chloride	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Halogenated Benzenes															
1,2,4-trichlorobenzene	mg/kg	0.05						-	-	-	<0.05	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
4-chlorotoluene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Bromobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Chlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Hexachlorobenzene	mg/kg	0.05					80	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	-
Halogenated Hydrocarbons															
1,2-dibromoethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Bromomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Dichlorodifluoromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Iodomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Trichlorofluoromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	-



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								Domain	4	5	7	1	5	N/A	1	
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	
Herbicides																
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5				5,000		-	-	-	<0.5	-	-	-	-	-
2,4,5-TP (Silvex)	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
Hedonal	mg/kg	0.5				9,000		-	-	-	<0.5	-	-	-	-	-
2,4-Dichlorprop	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
Atrazine	mg/kg	0.2				2,500		-	-	-	<0.2	-	-	-	-	-
Dicamba	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
Dinoseb	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5				5,000		-	-	-	<0.5	-	-	-	-	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5				5,000		-	-	-	<0.5	-	-	-	-	-
Mecoprop	mg/kg	0.5				5,000		-	-	-	<0.5	-	-	-	-	-
MAH																
Total MAH	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
Isopropylbenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
Styrene	mg/kg	0.5						-	-	-	<0.5	-	-	-	-	-
Organochlorine Pesticides																
Organochlorine pesticides EPAVic	mg/kg	0.1						<0.1	-	<0.1	0.27	<0.1	<0.1	<0.1	<0.1	-
Other organochlorine pesticides EPAVic	mg/kg	0.1						<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
4,4-DDE	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
a-BHC	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Aldrin	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Aldrin + Dieldrin	mg/kg	0.05				45		<0.05	-	<0.05	0.27	<0.05	<0.05	<0.05	<0.05	-
b-BHC	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Chlordane	mg/kg	0.1				530		<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-
d-BHC	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
DDD	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
DDT	mg/kg	0.05			640			<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
DDT+DDE+DDD	mg/kg	0.05				3,600		<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Dieldrin	mg/kg	0.05						<0.05	-	<0.05	0.27	<0.05	<0.05	<0.05	<0.05	-
Endosulfan I	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Endosulfan II	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Endosulfan sulphate	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Endrin	mg/kg	0.05				100		<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Endrin aldehyde	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Endrin ketone	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
g-BHC (Lindane)	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Heptachlor	mg/kg	0.05				50		<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Heptachlor epoxide	mg/kg	0.05						<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Methoxychlor	mg/kg	0.05				2,500		<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-
Toxaphene	mg/kg	0.5				160		<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
Organic																
Total Organic Carbon	%							-	-	-	-	-	-	-	-	-
Organophosphorous Pesticides																
Tokuthion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	-
Azinophos methyl	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	-
Bolstar (Sulprofos)	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	-



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6	BH02_4.2	BH03_0.9	BH04_0.3
								Domain	4	5	7	1	5	N/A	1
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
Chlorfenvinphos	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Chlorpyrifos	mg/kg	0.2					2,000	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	-
Chlorpyrifos-methyl	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Coumaphos	mg/kg	2						<2	-	<2	-	<2	<2	<2	-
Demeton-O	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Demeton-S	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Diazinon	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Dichlorvos	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Dimethoate	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Disulfoton	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Ethion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Ethoprop	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Fenitrothion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Fensulfothion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Fenthion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
EPN	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Malathion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Merphos	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Methyl parathion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Mevinphos (Phosdrin)	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Monocrotophos	mg/kg	2						<2	-	<2	-	<2	<2	<2	-
Naled (Dibrom)	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Omethoate	mg/kg	2						<2	-	<2	-	<2	<2	<2	-
Phorate	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Pyrazophos	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Ronnel	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Terbufos	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Trichloronate	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Tetrachlorvinphos	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Pesticides															
Bifenthrin	mg/kg	0.05					4,500	-	-	-	<0.05	-	-	-	-
Mirex	mg/kg	0.05					100	-	-	-	-	-	-	-	-
Parathion	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Pirimiphos-methyl	mg/kg	0.2						<0.2	-	<0.2	-	<0.2	<0.2	<0.2	-
Solvents															
Methyl Ethyl Ketone	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
4-Methyl-2-pentanone	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Acetone	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Allyl chloride	mg/kg	0.5						-	-	-	<0.5	-	-	-	-
Carbon disulfide	mg/kg	0.5						-	-	-	<0.5	-	-	-	-

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

¹ EIL Calculator (CEC: 19cmolc/kg dwt, pH: 8.6, OC: 0.1%, Clay: 3.7%)

NB: The EIL value for chromium is for chromium III only

² CRC CARE, Technical Report 10, Health screening levels for petroleum hydrocarbons in soil and groundwater

³ CRC CARE, Technical Report 39, Risk-based management and remediation guidance for benzo(a)pyrene



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH04_2.3	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6
								Domain	7	5	4	4	5	2	2
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
Inorganics															
Conductivity (1:5 aqueous extract)	µS/cm	10						330	-	-	-	-	-	-	-
Cation Exchange Capacity	meq/100g	0.5						19	-	-	-	-	-	-	-
Cyanide (Free)	mg/kg	5					1,500	<5	-	-	-	<5	-	-	-
Cyanide Total	mg/kg	5						-	-	-	<5	-	-	-	-
Fluoride	mg/kg	100						-	-	-	<100	-	-	-	-
Moisture Content (dried @ 103°C)	%	1						7.0	12	3.8	3.2	21	13	13	13
pH (1:5 aqueous extract)	-	0.1						-	-	-	7.5	-	5.4	-	-
pH (Lab)	-	0.1						8.6	-	-	-	-	-	-	-
Metals															
Iron (%)	%	0.01						6.3	-	-	-	-	-	-	-
Arsenic	mg/kg	2			160		3,000	84	26	6.7	2.8	18	53	2.5	2.5
Barium	mg/kg	10						-	-	54	-	-	250	-	-
Beryllium	mg/kg	2					500	3.1	-	<2	-	<2	<2	-	-
Boron	mg/kg	10					300,000	<20	-	<20	-	<20	26	-	-
Cadmium	mg/kg	0.4					900	<0.4	<0.4	<0.4	<0.4	<0.4	0.5	<0.4	<0.4
Chromium (hexavalent)	mg/kg	1					3,600	<1	-	-	<1	<1	-	-	-
Chromium (III+VI)	mg/kg	5			490 ¹			50	800	99	27	57	77	63	63
Cobalt	mg/kg	5					4,000	31	-	<5	-	17	24	-	-
Copper	mg/kg	5			170 ¹		240,000	<5	1,600	42	11	17	130	13	13
Iron	mg/kg	20						63,000	-	-	-	-	-	-	-
Lead	mg/kg	5					1,500	5.8	6,800	18	7.6	52	170	13	13
Manganese	mg/kg	5					60,000	250	-	1,000	-	260	770	-	-
Mercury	mg/kg	0.1					730	<0.1	2.1	<0.1	<0.1	0.2	0.3	<0.1	<0.1
Molybdenum	mg/kg	5						-	-	-	<5	-	-	-	-
Nickel	mg/kg	5			450 ¹		6,000	24	110	17	5.7	44	110	42	42
Selenium	mg/kg	2					10,000	<2	-	<2	<2	<2	<2	-	-
Silver	mg/kg	2						-	-	-	<2	-	-	-	-
Tin	mg/kg	10						-	-	-	<10	-	-	-	-
Vanadium	mg/kg	10						-	-	15	-	-	52	-	-
Zinc	mg/kg	5			1,100 ¹		400,000	28	1,000	180	19	100	240	44	44
BTEX															
Naphthalene (VOC)	mg/kg	0.5			370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1		4 4 6 10		95		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1				135		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1				185		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2						<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1						<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3				95		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH															
C6-C9 Fraction	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20						<20	25	<20	<20	<20	<20	<20	<20
C15-C28 Fraction	mg/kg	50						<50	180	<50	<50	74	540	<50	<50
C29-C36 Fraction	mg/kg	50						<50	400	<50	<50	<50	250	<50	<50
C10-C36 Fraction (Sum)	mg/kg	50						<50	605	<50	<50	74	790	<50	<50
C6-C10 Fraction (F1)	mg/kg	20	800					<20	<20	<20	<20	<20	<20	<20	<20
C6-C10 (F1 minus BTEX)	mg/kg	20		250 360 590		215		<20	<20	<20	<20	<20	<20	<20	<20
>C10-C16 Fraction (F2)	mg/kg	50	1,000			170		<50	<50	<50	<50	<50	<50	<50	<50
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50				170		<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 Fraction (F3)	mg/kg	100	5,000			2,500		<100	510	<100	<100	130	720	<100	<100
>C34-C40 Fraction (F4)	mg/kg	100	10,000			6,600		<100	610	<100	<100	<100	100	<100	<100



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH04_2.3	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6
								Domain	7	5	4	4	5	2	2
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
>C10-C40 Fraction (Sum)	mg/kg	100						<100	1,120	<100	<100	130	820	<100	
PAH															
Acenaphthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a) pyrene	mg/kg	0.5				1.4		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	mg/kg	0.5			370		1,100 ³	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5			172 ³		40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5			172 ³		40	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5			172 ³		40	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PAHs (Sum of total)	mg/kg	0.5					4,000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PCBs															
Arochlor 1016	mg/kg	0.1						<0.1	-	-	-	<0.1	<0.1	-	-
Arochlor 1221	mg/kg	0.1						<0.1	-	-	-	<0.1	<0.1	-	-
Arochlor 1232	mg/kg	0.1						<0.1	-	-	-	<0.1	<0.1	-	-
Arochlor 1242	mg/kg	0.1						<0.1	-	-	-	<0.1	<0.1	-	-
Arochlor 1248	mg/kg	0.1						<0.1	-	-	-	<0.1	<0.1	-	-
Arochlor 1254	mg/kg	0.1						<0.1	-	-	-	<0.1	<0.1	-	-
Arochlor 1260	mg/kg	0.1						<0.1	-	-	-	<0.1	<0.1	-	-
PCBs (Sum of total)	mg/kg	0.1					7	<0.1	-	-	-	<0.1	<0.1	-	-
Phenols															
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4						<0.4	-	-	-	<0.4	<0.4	-	-
2,4,5-Trichlorophenol	mg/kg	1						-	-	-	-	<1	-	-	-
2,4,6-Trichlorophenol	mg/kg	1						-	-	-	-	<1	-	-	-
2,4-Dichlorophenol	mg/kg	0.5						-	-	-	-	<0.5	-	-	-
2,4-Dimethylphenol	mg/kg	0.5						-	-	-	-	<0.5	-	-	-
2,4-Dinitrophenol	mg/kg	5						-	-	-	-	<5	-	-	-
2,6-Dichlorophenol	mg/kg	0.5						-	-	-	-	<0.5	-	-	-
2-Chlorophenol	mg/kg	0.5						-	-	-	-	<0.5	-	-	-
2-Methylphenol	mg/kg	0.2						<0.2	-	-	-	<0.2	<0.2	-	-
2-Nitrophenol	mg/kg	1						-	-	-	-	<1	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	0.5						-	-	-	-	<5	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20						-	-	-	-	<20	-	-	-
4-chloro-3-methylphenol	mg/kg	1						-	-	-	-	<1	-	-	-
4-Nitrophenol	mg/kg	5						-	-	-	-	<5	-	-	-
Cresol Total	mg/kg	0.5					25,000	-	-	-	-	<0.5	-	-	-
Pentachlorophenol	mg/kg	1					660	<1	-	-	-	<1	<1	-	-
Picloram	mg/kg	0.5					35,000	<0.5	-	-	-	-	<0.5	-	-
Tetrachlorophenols	mg/kg	10						-	-	-	-	<10	-	-	-
Phenol	mg/kg	0.5					240,000	<0.5	-	-	-	<0.5	<0.5	-	-
Phenols (Total Halogenated)	mg/kg	1						-	-	-	-	<1	-	-	-



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

								Field ID	BH04_2.3	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6
								Domain	7	5	4	4	5	2	2
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil								
Phenols (Total Non Halogenated)	mg/kg	20						-	-	-	<20	-	-	-	
Particle Size															
% Clay*	%	1						3.7	-	-	-	-	-	-	
Other															
Actril (Ioxnyl)	mg/kg	0.5						-	-	-	-	-	-	-	
Chlorinated Hydrocarbons															
Chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Other chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,1,1,2-tetrachloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,1,1-trichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,1,2,2-tetrachloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,1,2-trichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,1-dichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,1-dichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,2,3-trichloropropane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,2-dichloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,2-dichloropropane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,3-dichloropropane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Bromochloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Bromodichloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Bromoform	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Carbon tetrachloride	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Chlorodibromomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Chloroethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Chloroform	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Chloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
cis-1,2-dichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
cis-1,3-dichloropropene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Dibromomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Dichloromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Hexachlorobutadiene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Trichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Tetrachloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
trans-1,2-dichloroethene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
trans-1,3-dichloropropene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Vinyl chloride	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Halogenated Benzenes															
1,2,4-trichlorobenzene	mg/kg	0.05						-	-	-	<0.5	-	-	-	
1,2-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,3-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
1,4-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
4-chlorotoluene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Bromobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Chlorobenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Hexachlorobenzene	mg/kg	0.05					80	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	
Halogenated Hydrocarbons															
1,2-dibromoethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Bromomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Dichlorodifluoromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Iodomethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Trichlorofluoromethane	mg/kg	0.5						-	-	-	<0.5	-	-	-	



Table 2
Environmental Site Assessment
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							Field ID	BH04_2.3	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6
							Domain	7	5	4	4	5	2	2
							Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil							
Herbicides														
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					5,000	<0.5	-	-	-	<0.5	-	-
2,4,5-TP (Silvex)	mg/kg	0.5						-	-	-	-	-	-	-
Hedonal	mg/kg	0.5					9,000	<0.5	-	-	-	<0.5	-	-
2,4-Dichlorprop	mg/kg	0.5						-	-	-	-	-	-	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5						-	-	-	-	-	-	-
Atrazine	mg/kg	0.2					2,500	<0.2	-	-	-	<0.2	-	-
Dicamba	mg/kg	0.5						-	-	-	-	-	-	-
Dinoseb	mg/kg	0.5						-	-	-	<20	-	-	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					5,000	<0.5	-	-	-	<0.5	-	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					5,000	<0.5	-	-	-	<0.5	-	-
Mecoprop	mg/kg	0.5					5,000	<0.5	-	-	-	<0.5	-	-
MAH														
Total MAH	mg/kg	0.5						-	-	-	<0.5	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-
Isopropylbenzene	mg/kg	0.5						-	-	-	<0.5	-	-	-
Styrene	mg/kg	0.5						-	-	-	<0.5	-	-	-
Organochlorine Pesticides														
Organochlorine pesticides EPAVic	mg/kg	0.1						-	<0.1	-	<0.1	<0.1	-	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1						-	<0.1	-	<0.1	<0.1	-	<0.1
4,4-DDE	mg/kg	0.05						<0.05	<0.05	-	<0.05	<0.05	-	<0.05
a-BHC	mg/kg	0.05						-	<0.05	-	<0.05	<0.05	-	<0.05
Aldrin	mg/kg	0.05						<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Aldrin + Dieldrin	mg/kg	0.05					45	<0.05	<0.05	-	<0.05	<0.05	-	<0.05
b-BHC	mg/kg	0.05						-	<0.05	-	<0.05	<0.05	-	<0.05
Chlordane	mg/kg	0.1					530	<0.1	<0.1	-	<0.1	<0.1	-	<0.1
d-BHC	mg/kg	0.05						-	<0.05	-	<0.05	<0.05	-	<0.05
DDD	mg/kg	0.05						<0.05	<0.05	-	<0.05	<0.05	-	<0.05
DDT	mg/kg	0.05			640			<0.05	<0.05	-	<0.05	<0.05	-	<0.05
DDT+DDE+DDD	mg/kg	0.05					3,600	<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Dieldrin	mg/kg	0.05						<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Endosulfan I	mg/kg	0.05						<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Endosulfan II	mg/kg	0.05						<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Endosulfan sulphate	mg/kg	0.05						<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Endrin	mg/kg	0.05					100	<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Endrin aldehyde	mg/kg	0.05						-	<0.05	-	<0.05	<0.05	-	<0.05
Endrin ketone	mg/kg	0.05						-	<0.05	-	<0.05	<0.05	-	<0.05
g-BHC (Lindane)	mg/kg	0.05						-	<0.05	-	<0.05	<0.05	-	<0.05
Heptachlor	mg/kg	0.05					50	<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Heptachlor epoxide	mg/kg	0.05						-	<0.05	-	<0.05	<0.05	-	<0.05
Methoxychlor	mg/kg	0.05					2,500	<0.05	<0.05	-	<0.05	<0.05	-	<0.05
Toxaphene	mg/kg	0.5					160	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Organic														
Total Organic Carbon	%							0.1	-	-	-	-	-	-
Organophosphorous Pesticides														
Tokuthion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2
Azinophos methyl	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2
Bolstar (Sulprofos)	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2



Table 2
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								Field ID	BH04_2.3	BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6	BH06_0.9	BH06_1.6
								Domain	7	5	4	4	5	2	2
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil								
Chlorfenvinphos	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Chlorpyrifos	mg/kg	0.2					2,000	<0.2	<0.2	-	-	<0.2	-	<0.2	
Chlorpyrifos-methyl	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Coumaphos	mg/kg	2						-	<2	-	-	<2	-	<2	
Demeton-O	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Demeton-S	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Diazinon	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Dichlorvos	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Dimethoate	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Disulfoton	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Ethion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Ethoprop	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Fenitrothion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Fensulfothion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Fenthion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
EPN	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Malathion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Merphos	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Methyl parathion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Mevinphos (Phosdrin)	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Monocrotophos	mg/kg	2						-	<2	-	-	<2	-	<2	
Naled (Dibrom)	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Omethoate	mg/kg	2						-	<2	-	-	<2	-	<2	
Phorate	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Pyrazophos	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Ronnel	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Terbufos	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Trichloronate	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Tetrachlorvinphos	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Pesticides															
Bifenthrin	mg/kg	0.05					4,500	<0.05	-	-	-	<0.05	-	-	
Mirex	mg/kg	0.05					100	<0.05	-	-	-	<0.05	-	-	
Parathion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Pirimiphos-methyl	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2	
Solvents															
Methyl Ethyl Ketone	mg/kg	0.5						-	-	-	<0.5	-	-	-	
4-Methyl-2-pentanone	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Acetone	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Allyl chloride	mg/kg	0.5						-	-	-	<0.5	-	-	-	
Carbon disulfide	mg/kg	0.5						-	-	-	<0.5	-	-	-	

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

¹ EIL Calculator (CEC: 19cmolc/kg dwt, pH: 8.6, OC: 0.1%, Clay: 3.7%)

NB: The EIL value for chromium is for chromium III only

² CRC CARE, Technical Report 10, Health screening levels for petroleum hydrocarbons in soil and groundwater

³ CRC CARE, Technical Report 39, Risk-based management and remediation guidance for benzo(a)pyrene



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH07_0.5	BH08_0.4	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4
								Domain	2	4	3	1	5	5	1
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023
Inorganics															
Conductivity (1:5 aqueous extract)	µS/cm	10						-	-	-	-	-	-	-	-
Cation Exchange Capacity	meq/100g	0.5						-	-	-	-	-	-	-	-
Cyanide (Free)	mg/kg	5					1,500	-	-	-	-	-	-	-	-
Cyanide Total	mg/kg	5						-	-	-	-	-	-	-	-
Fluoride	mg/kg	100						-	-	-	-	-	-	-	-
Moisture Content (dried @ 103°C)	%	1						1.5	2.7	9.4	13	23	15	5.7	
pH (1:5 aqueous extract)	-	0.1						8.2	-	7.3	7.2	8.4	8.9	6.6	
pH (Lab)	-	0.1						-	-	-	-	-	-	-	
Metals															
Iron (%)	%	0.01						-	-	-	-	-	-	-	-
Arsenic	mg/kg	2			160		3,000	7.4	4.5	4.6	7.0	24	23	64	
Barium	mg/kg	10						640	-	-	320	-	-	-	
Beryllium	mg/kg	2					500	<2	-	-	<2	-	-	-	
Boron	mg/kg	10					300,000	<20	-	-	19	-	-	-	
Cadmium	mg/kg	0.4					900	<0.4	<0.4	<0.4	<0.4	<0.4	4.2	45	
Chromium (hexavalent)	mg/kg	1					3,600	-	-	-	-	-	-	-	
Chromium (III+VI)	mg/kg	5			490 ¹			190	58	50	50	73	45	340	
Cobalt	mg/kg	5					4,000	<5	-	-	18	-	-	-	
Copper	mg/kg	5			170 ¹		240,000	26	20	20	52	130	37	57,000	
Iron	mg/kg	20						-	-	-	-	-	-	-	
Lead	mg/kg	5					1,500	11	13	33	160	160	99	8,000	
Manganese	mg/kg	5					60,000	6,500	-	-	440	-	-	-	
Mercury	mg/kg	0.1					730	<0.1	<0.1	0.2	<0.1	0.9	<0.1	<1	
Molybdenum	mg/kg	5						-	-	-	-	-	-	-	
Nickel	mg/kg	5			450 ¹		6,000	33	18	29	49	120	45	500	
Selenium	mg/kg	2					10,000	<2	-	-	<2	-	-	-	
Silver	mg/kg	2						-	-	-	-	-	-	-	
Tin	mg/kg	10						-	-	-	-	-	-	-	
Vanadium	mg/kg	10						19	-	-	52	-	-	-	
Zinc	mg/kg	5			1,100 ¹		400,000	130	29	56	630	300	4,500	19,000	
BTEX															
Naphthalene (VOC)	mg/kg	0.5			370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1		4 4 6 10		95		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1				135		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1				185		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2						<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1						<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3				95		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH															
C6-C9 Fraction	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20
C15-C28 Fraction	mg/kg	50						<50	<50	<50	<50	260	140	<50	
C29-C36 Fraction	mg/kg	50						<50	<50	<50	<50	310	120	<50	
C10-C36 Fraction (Sum)	mg/kg	50						<50	<50	<50	<50	570	260	<50	
C6-C10 Fraction (F1)	mg/kg	20	800					<20	<20	<20	<20	<20	<20	<20	
C6-C10 (F1 minus BTEX)	mg/kg	20		250 360 590		215		<20	<20	<20	<20	<20	<20	<20	
>C10-C16 Fraction (F2)	mg/kg	50	1,000			170		<50	<50	<50	<50	<50	<50	<50	
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50				170		<50	<50	<50	<50	<50	<50	<50	
>C16-C34 Fraction (F3)	mg/kg	100	5,000			2,500		<100	<100	<100	<100	500	240	<100	
>C34-C40 Fraction (F4)	mg/kg	100	10,000			6,600		<100	<100	<100	<100	100	<100	<100	



Table 2
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	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH07_0.5	BH08_0.4	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4
								Domain	2	4	3	1	5	5	1
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023
>C10-C40 Fraction (Sum)	mg/kg	100						<100	<100	<100	<100	600	240	<100	
PAHs															
Acenaphthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a) pyrene	mg/kg	0.5				1.4		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	mg/kg	0.5			370		1,100 ³	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5			172 ³		40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5			172 ³		40	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5			172 ³		40	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PAHs (Sum of total)	mg/kg	0.5					4,000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
PCBs															
Arochlor 1016	mg/kg	0.1						-	-	-	-	-	-	-	-
Arochlor 1221	mg/kg	0.1						-	-	-	-	-	-	-	-
Arochlor 1232	mg/kg	0.1						-	-	-	-	-	-	-	-
Arochlor 1242	mg/kg	0.1						-	-	-	-	-	-	-	-
Arochlor 1248	mg/kg	0.1						-	-	-	-	-	-	-	-
Arochlor 1254	mg/kg	0.1						-	-	-	-	-	-	-	-
Arochlor 1260	mg/kg	0.1						-	-	-	-	-	-	-	-
PCBs (Sum of total)	mg/kg	0.1					7	-	-	-	-	-	-	-	-
Phenols															
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4						-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	1						-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	1						-	-	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.5						-	-	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.5						-	-	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	5						-	-	-	-	-	-	-	-
2,6-Dichlorophenol	mg/kg	0.5						-	-	-	-	-	-	-	-
2-Chlorophenol	mg/kg	0.5						-	-	-	-	-	-	-	-
2-Methylphenol	mg/kg	0.2						-	-	-	-	-	-	-	-
2-Nitrophenol	mg/kg	1						-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	0.5						-	-	-	-	-	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20						-	-	-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	1						-	-	-	-	-	-	-	-
4-Nitrophenol	mg/kg	5						-	-	-	-	-	-	-	-
Cresol Total	mg/kg	0.5					25,000	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	1					660	-	-	-	-	-	-	-	-
Picloram	mg/kg	0.5					35,000	-	-	-	-	-	-	-	-
Tetrachlorophenols	mg/kg	10						-	-	-	-	-	-	-	-
Phenol	mg/kg	0.5					240,000	-	-	-	-	-	-	-	-
Phenols (Total Halogenated)	mg/kg	1						-	-	-	-	-	-	-	-



Table 2
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			Field ID	BH07_0.5	BH08_0.4	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4	
			Domain	2	4	3	1	5	5	1	
			Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023	
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil				
Phenols (Total Non Halogenated)	mg/kg	20						-	-	-	
Particle Size											
% Clay*	%	1						-	-	-	
Other											
Actril (Ioxnyl)	mg/kg	0.5						-	-	-	
Chlorinated Hydrocarbons											
Chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	
Other chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	
1,1,1,2-tetrachloroethane	mg/kg	0.5						-	-	-	
1,1,1-trichloroethane	mg/kg	0.5						-	-	-	
1,1,2,2-tetrachloroethane	mg/kg	0.5						-	-	-	
1,1,2-trichloroethane	mg/kg	0.5						-	-	-	
1,1-dichloroethane	mg/kg	0.5						-	-	-	
1,1-dichloroethene	mg/kg	0.5						-	-	-	
1,2,3-trichloropropane	mg/kg	0.5						-	-	-	
1,2-dichloroethane	mg/kg	0.5						-	-	-	
1,2-dichloropropane	mg/kg	0.5						-	-	-	
1,3-dichloropropane	mg/kg	0.5						-	-	-	
Bromochloromethane	mg/kg	0.5						-	-	-	
Bromodichloromethane	mg/kg	0.5						-	-	-	
Bromoform	mg/kg	0.5						-	-	-	
Carbon tetrachloride	mg/kg	0.5						-	-	-	
Chlorodibromomethane	mg/kg	0.5						-	-	-	
Chloroethane	mg/kg	0.5						-	-	-	
Chloroform	mg/kg	0.5						-	-	-	
Chloromethane	mg/kg	0.5						-	-	-	
cis-1,2-dichloroethene	mg/kg	0.5						-	-	-	
cis-1,3-dichloropropene	mg/kg	0.5						-	-	-	
Dibromomethane	mg/kg	0.5						-	-	-	
Dichloromethane	mg/kg	0.5						-	-	-	
Hexachlorobutadiene	mg/kg	0.5						-	-	-	
Trichloroethene	mg/kg	0.5						-	-	-	
Tetrachloroethene	mg/kg	0.5						-	-	-	
trans-1,2-dichloroethene	mg/kg	0.5						-	-	-	
trans-1,3-dichloropropene	mg/kg	0.5						-	-	-	
Vinyl chloride	mg/kg	0.5						-	-	-	
Halogenated Benzenes											
1,2,4-trichlorobenzene	mg/kg	0.05						-	-	-	
1,2-dichlorobenzene	mg/kg	0.5						-	-	-	
1,3-dichlorobenzene	mg/kg	0.5						-	-	-	
1,4-dichlorobenzene	mg/kg	0.5						-	-	-	
4-chlorotoluene	mg/kg	0.5						-	-	-	
Bromobenzene	mg/kg	0.5						-	-	-	
Chlorobenzene	mg/kg	0.5						-	-	-	
Hexachlorobenzene	mg/kg	0.05					80	-	<0.05	<0.05	
Halogenated Hydrocarbons											
1,2-dibromoethane	mg/kg	0.5						-	-	-	
Bromomethane	mg/kg	0.5						-	-	-	
Dichlorodifluoromethane	mg/kg	0.5						-	-	-	
Iodomethane	mg/kg	0.5						-	-	-	
Trichlorofluoromethane	mg/kg	0.5						-	-	-	



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							Field ID	BH07_0.5	BH08_0.4	BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4	BH10_0.4
							Domain	2	4	3	1	5	5	1
							Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil							
Herbicides														
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					5,000	-	-	-	-	-	-	-
2,4,5-TP (Silvex)	mg/kg	0.5						-	-	-	-	-	-	-
Hedonal	mg/kg	0.5					9,000	-	-	-	-	-	-	-
2,4-Dichlorprop	mg/kg	0.5						-	-	-	-	-	-	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5						-	-	-	-	-	-	-
Atrazine	mg/kg	0.2					2,500	-	-	-	-	-	-	-
Dicamba	mg/kg	0.5						-	-	-	-	-	-	-
Dinoseb	mg/kg	0.5						-	-	-	-	-	-	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					5,000	-	-	-	-	-	-	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					5,000	-	-	-	-	-	-	-
Mecoprop	mg/kg	0.5					5,000	-	-	-	-	-	-	-
MAH														
Total MAH	mg/kg	0.5						-	-	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.5						-	-	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5						-	-	-	-	-	-	-
Isopropylbenzene	mg/kg	0.5						-	-	-	-	-	-	-
Styrene	mg/kg	0.5						-	-	-	-	-	-	-
Organochlorine Pesticides														
Organochlorine pesticides EPAVic	mg/kg	0.1						-	<0.1	-	-	<0.1	-	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1						-	<0.1	-	-	<0.1	-	<0.1
4,4-DDE	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
a-BHC	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Aldrin	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Aldrin + Dieldrin	mg/kg	0.05					45	-	<0.05	-	-	<0.05	-	<0.05
b-BHC	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Chlordane	mg/kg	0.1					530	-	<0.1	-	-	<0.1	-	<0.1
d-BHC	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
DDD	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
DDT	mg/kg	0.05			640			-	<0.05	-	-	<0.05	-	<0.05
DDT+DDE+DDD	mg/kg	0.05					3,600	-	<0.05	-	-	<0.05	-	<0.05
Dieldrin	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Endosulfan I	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Endosulfan II	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Endosulfan sulphate	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Endrin	mg/kg	0.05					100	-	<0.05	-	-	<0.05	-	<0.05
Endrin aldehyde	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Endrin ketone	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
g-BHC (Lindane)	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Heptachlor	mg/kg	0.05					50	-	<0.05	-	-	<0.05	-	<0.05
Heptachlor epoxide	mg/kg	0.05						-	<0.05	-	-	<0.05	-	<0.05
Methoxychlor	mg/kg	0.05					2,500	-	<0.05	-	-	<0.05	-	<0.05
Toxaphene	mg/kg	0.5					160	-	<0.5	-	-	<0.5	-	<0.5
Organic														
Total Organic Carbon	%							-	-	-	-	-	-	-
Organophosphorous Pesticides														
Tokuthion	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2
Azinophos methyl	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2
Bolstar (Sulprofos)	mg/kg	0.2						-	<0.2	-	-	<0.2	-	<0.2



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								Domain	2	4	3	1	5	5	1
								Date	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	06 Sep 2023	08 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil								
Chlorfenvinphos	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Chlorpyrifos	mg/kg	0.2					2,000	-	<0.2	-	-	-	<0.2	-	<0.2
Chlorpyrifos-methyl	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Coumaphos	mg/kg	2						-	<2	-	-	-	<2	-	<2
Demeton-O	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Demeton-S	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Diazinon	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Dichlorvos	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Dimethoate	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Disulfoton	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Ethion	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Ethoprop	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Fenitrothion	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Fensulfothion	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Fenthion	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
EPN	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Malathion	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Merphos	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Methyl parathion	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Monocrotophos	mg/kg	2						-	<2	-	-	-	<2	-	<2
Naled (Dibrom)	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Omethoate	mg/kg	2						-	<2	-	-	-	<2	-	<2
Phorate	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Pyrazophos	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Ronnel	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Terbufos	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Trichloronate	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Tetrachlorvinphos	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Pesticides															
Bifenthrin	mg/kg	0.05					4,500	-	-	-	-	-	-	-	-
Mirex	mg/kg	0.05					100	-	-	-	-	-	-	-	-
Parathion	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Pirimiphos-methyl	mg/kg	0.2						-	<0.2	-	-	-	<0.2	-	<0.2
Solvents															
Methyl Ethyl Ketone	mg/kg	0.5						-	-	-	-	-	-	-	-
4-Methyl-2-pentanone	mg/kg	0.5						-	-	-	-	-	-	-	-
Acetone	mg/kg	0.5						-	-	-	-	-	-	-	-
Allyl chloride	mg/kg	0.5						-	-	-	-	-	-	-	-
Carbon disulfide	mg/kg	0.5						-	-	-	-	-	-	-	-

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

¹ EIL Calculator (CEC: 19cmolc/kg dwt, pH: 8.6, OC: 0.1%, Clay: 3.7%)

NB: The EIL value for chromium is for chromium III only

² CRC CARE, Technical Report 10, Health screening levels for petroleum hydrocarbons in soil and groundwater

³ CRC CARE, Technical Report 39, Risk-based management and remediation guidance for benzo(a)pyrene



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH10_1.0	BH10_1.5	BH10_3.8	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
								Domain	1	1	5	5	1	1	1
								Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
Inorganics															
Conductivity (1:5 aqueous extract)	µS/cm	10						-	-	-	-	-	-	-	-
Cation Exchange Capacity	meq/100g	0.5						-	-	-	-	-	-	-	-
Cyanide (Free)	mg/kg	5					1,500	-	-	-	<5	-	<5	-	-
Cyanide Total	mg/kg	5						-	-	-	-	-	-	-	<5
Fluoride	mg/kg	100						-	-	-	-	-	-	-	<100
Moisture Content (dried @ 103°C)	%	1						8.1	16	15	20	13	10	6.7	
pH (1:5 aqueous extract)	-	0.1						-	7.3	7.8	-	3.8	-	8.1	
pH (Lab)	-	0.1						-	-	-	-	-	-	-	
Metals															
Iron (%)	%	0.01						-	-	-	-	-	-	-	-
Arsenic	mg/kg	2			160		3,000	30	15	12	38	57	4.9	31	
Barium	mg/kg	10						140	-	-	-	-	-	-	
Beryllium	mg/kg	2					500	<20	-	-	<2	-	<2	-	
Boron	mg/kg	10					300,000	<100	-	-	43	-	<20	-	
Cadmium	mg/kg	0.4					900	7.9	<0.4	1.2	<0.4	<0.4	<0.4	<0.4	
Chromium (hexavalent)	mg/kg	1					3,600	-	-	-	<1	-	<1	<1	
Chromium (III+VI)	mg/kg	5			490 ¹			87	53	45	44	270	45	120	
Cobalt	mg/kg	5					4,000	<50	-	-	18	-	14	-	
Copper	mg/kg	5			170 ¹		240,000	18,000	34	19	130	190	10	94	
Iron	mg/kg	20						-	-	-	-	-	-	-	
Lead	mg/kg	5					1,500	4,000	20	100	2,600	70	8.4	45	
Manganese	mg/kg	5					60,000	360	-	-	460	-	260	-	
Mercury	mg/kg	0.1					730	<1	<0.1	1.4	0.9	0.2	<0.1	<0.1	
Molybdenum	mg/kg	5						-	-	-	-	-	-	6.2	
Nickel	mg/kg	5			450 ¹		6,000	160	41	35	58	170	28	70	
Selenium	mg/kg	2					10,000	<20	-	-	<2	-	<2	<2	
Silver	mg/kg	2						-	-	-	-	-	-	<2	
Tin	mg/kg	10						-	-	-	-	-	-	530	
Vanadium	mg/kg	10						<100	-	-	-	-	-	-	
Zinc	mg/kg	5			1,100 ¹		400,000	3,300	80	120	310	690	17	55	
BTEX															
Naphthalene (VOC)	mg/kg	0.5			370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	mg/kg	0.1		4 4 6 10		95		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1				135		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1				185		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2						<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1						<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3				95		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
TRH															
C6-C9 Fraction	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20
C10-C14 Fraction	mg/kg	20						<20	<20	<20	40	59	<20	25	
C15-C28 Fraction	mg/kg	50						220	<50	66	630	260	<50	220	
C29-C36 Fraction	mg/kg	50						200	<50	60	550	210	<50	84	
C10-C36 Fraction (Sum)	mg/kg	50						420	<50	126	1,220	529	<50	329	
C6-C10 Fraction (F1)	mg/kg	20	800					<20	<20	<20	<20	<20	<20	<20	<20
C6-C10 (F1 minus BTEX)	mg/kg	20		250 360 590		215		<20	<20	<20	<20	<20	<20	<20	<20
>C10-C16 Fraction (F2)	mg/kg	50	1,000			170		<50	<50	<50	56	75	<50	<50	<50
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50				170		<50	<50	<50	56	75	<50	<50	<50
>C16-C34 Fraction (F3)	mg/kg	100	5,000			2,500		340	<100	140	1,100	360	<100	270	
>C34-C40 Fraction (F4)	mg/kg	100	10,000			6,600		180	<100	<100	310	140	<100	<100	<100



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	Field ID	BH10_1.0	BH10_1.5	BH10_3.8	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
								Domain	1	1	5	5	1	1	1
								Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
>C10-C40 Fraction (Sum)	mg/kg	100						520	<100	140	1,466	575	<100	270	
PAH															
Acenaphthene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	mg/kg	0.5						1.0	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Benzo(a) pyrene	mg/kg	0.5				1.4		1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5						0.9	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5						0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5						<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5
Chrysene	mg/kg	0.5						0.9	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5						1.6	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	mg/kg	0.5			370		1,100 ³	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5						0.8	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5						1.9	<0.5	<0.5	1.0	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5			172 ³		40	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5			172 ³		40	1.5	0.6	0.6	0.8	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5			172 ³		40	1.8	1.2	1.2	1.3	1.2	1.2	1.2	1.2
PAHs (Sum of total)	mg/kg	0.5					4,000	8.7	<0.5	<0.5	6.4	<0.5	<0.5	<0.5	<0.5
PCBs															
Arochlor 1016	mg/kg	0.1						-	-	-	<0.1	-	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	0.1						-	-	-	<0.1	-	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	0.1						-	-	-	<0.1	-	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	0.1						-	-	-	<0.1	-	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	0.1						-	-	-	<0.1	-	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	0.1						-	-	-	<0.1	-	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	0.1						-	-	-	<0.1	-	<0.1	<0.1	<0.1
PCBs (Sum of total)	mg/kg	0.1					7	-	-	-	<0.1	-	<0.1	<0.1	<0.1
Phenols															
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4						-	-	-	<0.4	-	<0.4	<0.4	<0.4
2,4,5-Trichlorophenol	mg/kg	1						-	-	-	-	-	-	<1	<1
2,4,6-Trichlorophenol	mg/kg	1						-	-	-	-	-	-	<1	<1
2,4-Dichlorophenol	mg/kg	0.5						-	-	-	-	-	-	<0.5	<0.5
2,4-Dimethylphenol	mg/kg	0.5						-	-	-	-	-	-	<0.5	<0.5
2,4-Dinitrophenol	mg/kg	5						-	-	-	-	-	-	<5	<5
2,6-Dichlorophenol	mg/kg	0.5						-	-	-	-	-	-	<0.5	<0.5
2-Chlorophenol	mg/kg	0.5						-	-	-	-	-	-	<0.5	<0.5
2-Methylphenol	mg/kg	0.2						-	-	-	<0.2	-	<0.2	<0.2	<0.2
2-Nitrophenol	mg/kg	1						-	-	-	-	-	-	<1	<1
4,6-Dinitro-2-methylphenol	mg/kg	0.5						-	-	-	-	-	-	<5	<5
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20						-	-	-	-	-	-	<20	<20
4-chloro-3-methylphenol	mg/kg	1						-	-	-	-	-	-	<1	<1
4-Nitrophenol	mg/kg	5						-	-	-	-	-	-	<5	<5
Cresol Total	mg/kg	0.5					25,000	-	-	-	-	-	-	<0.5	<0.5
Pentachlorophenol	mg/kg	1					660	-	-	-	<1	-	<1	<1	<1
Picloram	mg/kg	0.5					35,000	-	-	-	<0.5	-	<0.5	-	-
Tetrachlorophenols	mg/kg	10						-	-	-	-	-	-	<10	<10
Phenol	mg/kg	0.5					240,000	-	-	-	<0.5	-	<0.5	<0.5	<0.5
Phenols (Total Halogenated)	mg/kg	1						-	-	-	-	-	-	<1	<1



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

			Field ID	BH10_1.0	BH10_1.5	BH10_3.8	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3	
			Domain	1	1	5	5	1	1	1	
			Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil				
Phenols (Total Non Halogenated)	mg/kg	20						-	-	-	<20
Particle Size											
% Clay*	%	1						-	-	-	-
Other											
Actril (Ioxnyl)	mg/kg	0.5						-	-	-	-
Chlorinated Hydrocarbons											
Chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	<0.5
Other chlorinated hydrocarbons EPAVic	mg/kg	0.5						-	-	-	<0.5
1,1,1,2-tetrachloroethane	mg/kg	0.5						-	-	-	<0.5
1,1,1-trichloroethane	mg/kg	0.5						-	-	-	<0.5
1,1,2,2-tetrachloroethane	mg/kg	0.5						-	-	-	<0.5
1,1,2-trichloroethane	mg/kg	0.5						-	-	-	<0.5
1,1-dichloroethane	mg/kg	0.5						-	-	-	<0.5
1,1-dichloroethene	mg/kg	0.5						-	-	-	<0.5
1,2,3-trichloropropane	mg/kg	0.5						-	-	-	<0.5
1,2-dichloroethane	mg/kg	0.5						-	-	-	<0.5
1,2-dichloropropane	mg/kg	0.5						-	-	-	<0.5
1,3-dichloropropane	mg/kg	0.5						-	-	-	<0.5
Bromochloromethane	mg/kg	0.5						-	-	-	<0.5
Bromodichloromethane	mg/kg	0.5						-	-	-	<0.5
Bromoform	mg/kg	0.5						-	-	-	<0.5
Carbon tetrachloride	mg/kg	0.5						-	-	-	<0.5
Chlorodibromomethane	mg/kg	0.5						-	-	-	<0.5
Chloroethane	mg/kg	0.5						-	-	-	<0.5
Chloroform	mg/kg	0.5						-	-	-	<0.5
Chloromethane	mg/kg	0.5						-	-	-	<0.5
cis-1,2-dichloroethene	mg/kg	0.5						-	-	-	<0.5
cis-1,3-dichloropropene	mg/kg	0.5						-	-	-	<0.5
Dibromomethane	mg/kg	0.5						-	-	-	<0.5
Dichloromethane	mg/kg	0.5						-	-	-	<0.5
Hexachlorobutadiene	mg/kg	0.5						-	-	-	<0.5
Trichloroethene	mg/kg	0.5						-	-	-	<0.5
Tetrachloroethene	mg/kg	0.5						-	-	-	<0.5
trans-1,2-dichloroethene	mg/kg	0.5						-	-	-	<0.5
trans-1,3-dichloropropene	mg/kg	0.5						-	-	-	<0.5
Vinyl chloride	mg/kg	0.5						-	-	-	<0.5
Halogenated Benzenes											
1,2,4-trichlorobenzene	mg/kg	0.05						-	-	-	<0.5
1,2-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5
1,3-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5
1,4-dichlorobenzene	mg/kg	0.5						-	-	-	<0.5
4-chlorotoluene	mg/kg	0.5						-	-	-	<0.5
Bromobenzene	mg/kg	0.5						-	-	-	<0.5
Chlorobenzene	mg/kg	0.5						-	-	-	<0.5
Hexachlorobenzene	mg/kg	0.05					80	-	-	<0.05	<0.05
Halogenated Hydrocarbons											
1,2-dibromoethane	mg/kg	0.5						-	-	-	<0.5
Bromomethane	mg/kg	0.5						-	-	-	<0.5
Dichlorodifluoromethane	mg/kg	0.5						-	-	-	<0.5
Iodomethane	mg/kg	0.5						-	-	-	<0.5
Trichlorofluoromethane	mg/kg	0.5						-	-	-	<0.5



Table 2
Environmental Site Assessment
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Analytical Results - NEPM

			Field ID	BH10_1.0	BH10_1.5	BH10_3.8	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
			Domain	1	1	5	5	1	1	1
			Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil			
Herbicides										
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					5,000	-	-	-
2,4,5-TP (Silvex)	mg/kg	0.5						-	-	-
Hedonal	mg/kg	0.5					9,000	-	-	-
2,4-Dichlorprop	mg/kg	0.5						-	-	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5						-	-	-
Atrazine	mg/kg	0.2					2,500	-	-	-
Dicamba	mg/kg	0.5						-	-	-
Dinoseb	mg/kg	0.5						-	-	<20
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					5,000	-	-	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					5,000	-	-	-
Mecoprop	mg/kg	0.5					5,000	-	-	-
MAH										
Total MAH	mg/kg	0.5						-	-	<0.5
1,2,4-trimethylbenzene	mg/kg	0.5						-	-	<0.5
1,3,5-trimethylbenzene	mg/kg	0.5						-	-	<0.5
Isopropylbenzene	mg/kg	0.5						-	-	<0.5
Styrene	mg/kg	0.5						-	-	<0.5
Organochlorine Pesticides										
Organochlorine pesticides EPAVic	mg/kg	0.1						-	-	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1						-	-	<0.1
4,4-DDE	mg/kg	0.05						-	-	<0.05
a-BHC	mg/kg	0.05						-	-	<0.05
Aldrin	mg/kg	0.05						-	-	<0.05
Aldrin + Dieldrin	mg/kg	0.05					45	-	-	<0.05
b-BHC	mg/kg	0.05						-	-	<0.05
Chlordane	mg/kg	0.1					530	-	-	<0.1
d-BHC	mg/kg	0.05						-	-	<0.05
DDD	mg/kg	0.05						-	-	<0.05
DDT	mg/kg	0.05			640			-	-	<0.05
DDT+DDE+DDD	mg/kg	0.05					3,600	-	-	<0.05
Dieldrin	mg/kg	0.05						-	-	<0.05
Endosulfan I	mg/kg	0.05						-	-	<0.05
Endosulfan II	mg/kg	0.05						-	-	<0.05
Endosulfan sulphate	mg/kg	0.05						-	-	<0.05
Endrin	mg/kg	0.05					100	-	-	<0.05
Endrin aldehyde	mg/kg	0.05						-	-	<0.05
Endrin ketone	mg/kg	0.05						-	-	<0.05
g-BHC (Lindane)	mg/kg	0.05						-	-	<0.05
Heptachlor	mg/kg	0.05					50	-	-	<0.05
Heptachlor epoxide	mg/kg	0.05						-	-	<0.05
Methoxychlor	mg/kg	0.05					2,500	-	-	<0.05
Toxaphene	mg/kg	0.5					160	-	-	<0.5
Organic										
Total Organic Carbon	%							-	-	-
Organophosphorous Pesticides										
Tokuthion	mg/kg	0.2						-	-	-
Azinophos methyl	mg/kg	0.2						-	-	-
Bolstar (Sulprofos)	mg/kg	0.2						-	-	-



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

							Field ID	BH10_1.0	BH10_1.5	BH10_3.8	BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
							Domain	1	1	5	5	1	1	1
							Date	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023	08 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil							
Chlorfenvinphos	mg/kg	0.2						-	-	-	-	-	-	-
Chlorpyrifos	mg/kg	0.2					2,000	-	-	-	<0.2	-	<0.2	-
Chlorpyrifos-methyl	mg/kg	0.2						-	-	-	-	-	-	-
Coumaphos	mg/kg	2						-	-	-	-	-	-	-
Demeton-O	mg/kg	0.2						-	-	-	-	-	-	-
Demeton-S	mg/kg	0.2						-	-	-	-	-	-	-
Diazinon	mg/kg	0.2						-	-	-	-	-	-	-
Dichlorvos	mg/kg	0.2						-	-	-	-	-	-	-
Dimethoate	mg/kg	0.2						-	-	-	-	-	-	-
Disulfoton	mg/kg	0.2						-	-	-	-	-	-	-
Ethion	mg/kg	0.2						-	-	-	-	-	-	-
Ethoprop	mg/kg	0.2						-	-	-	-	-	-	-
Fenitrothion	mg/kg	0.2						-	-	-	-	-	-	-
Fensulfothion	mg/kg	0.2						-	-	-	-	-	-	-
Fenthion	mg/kg	0.2						-	-	-	-	-	-	-
EPN	mg/kg	0.2						-	-	-	-	-	-	-
Malathion	mg/kg	0.2						-	-	-	-	-	-	-
Merphos	mg/kg	0.2						-	-	-	-	-	-	-
Methyl parathion	mg/kg	0.2						-	-	-	-	-	-	-
Mevinphos (Phosdrin)	mg/kg	0.2						-	-	-	-	-	-	-
Monocrotophos	mg/kg	2						-	-	-	-	-	-	-
Naled (Dibrom)	mg/kg	0.2						-	-	-	-	-	-	-
Omethoate	mg/kg	2						-	-	-	-	-	-	-
Phorate	mg/kg	0.2						-	-	-	-	-	-	-
Pyrazophos	mg/kg	0.2						-	-	-	-	-	-	-
Ronnel	mg/kg	0.2						-	-	-	-	-	-	-
Terbufos	mg/kg	0.2						-	-	-	-	-	-	-
Trichloronate	mg/kg	0.2						-	-	-	-	-	-	-
Tetrachlorvinphos	mg/kg	0.2						-	-	-	-	-	-	-
Pesticides														
Bifenthrin	mg/kg	0.05					4,500	-	-	-	<0.05	-	<0.05	-
Mirex	mg/kg	0.05					100	-	-	-	<0.05	-	<0.05	-
Parathion	mg/kg	0.2						-	-	-	-	-	-	-
Pirimiphos-methyl	mg/kg	0.2						-	-	-	-	-	-	-
Solvents														
Methyl Ethyl Ketone	mg/kg	0.5						-	-	-	-	-	-	<0.5
4-Methyl-2-pentanone	mg/kg	0.5						-	-	-	-	-	-	<0.5
Acetone	mg/kg	0.5						-	-	-	-	-	-	<0.5
Allyl chloride	mg/kg	0.5						-	-	-	-	-	-	<0.5
Carbon disulfide	mg/kg	0.5						-	-	-	-	-	-	<0.5

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

¹ EIL Calculator (CEC: 19cmolc/kg dwt, pH: 8.6, OC: 0.1%, Clay: 3.7%)

NB: The EIL value for chromium is for chromium III only

² CRC CARE, Technical Report 10, Health screening levels for petroleum hydrocarbons in soil and groundwater

³ CRC CARE, Technical Report 39, Risk-based management and remediation guidance for benzo(a)pyrene



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

							Field ID	BH14_0.15	BH15_0.1
							Domain	1	1
							Date	08 Sep 2023	08 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil		
Inorganics									
Conductivity (1:5 aqueous extract)	µS/cm	10						-	-
Cation Exchange Capacity	meq/100g	0.5						-	-
Cyanide (Free)	mg/kg	5					1,500	<5	-
Cyanide Total	mg/kg	5						<5	-
Fluoride	mg/kg	100						<100	-
Moisture Content (dried @ 103°C)	%	1						8.1	8.9
pH (1:5 aqueous extract)	-	0.1						8.1	8.4
pH (Lab)	-	0.1						-	-
Metals									
Iron (%)	%	0.01						-	-
Arsenic	mg/kg	2			160		3,000	12	7.0
Barium	mg/kg	10						200	-
Beryllium	mg/kg	2					500	<2	-
Boron	mg/kg	10					300,000	-	-
Cadmium	mg/kg	0.4					900	1.2	<0.4
Chromium (hexavalent)	mg/kg	1					3,600	<1	-
Chromium (III+VI)	mg/kg	5			490 ¹			52	41
Cobalt	mg/kg	5					4,000	12	-
Copper	mg/kg	5			170 ¹		240,000	71	38
Iron	mg/kg	20						-	-
Lead	mg/kg	5					1,500	110	150
Manganese	mg/kg	5					60,000	490	-
Mercury	mg/kg	0.1					730	0.2	<0.1
Molybdenum	mg/kg	5						6.5	-
Nickel	mg/kg	5			450 ¹		6,000	42	29
Selenium	mg/kg	2					10,000	<2	-
Silver	mg/kg	2						<2	-
Tin	mg/kg	10						24	-
Vanadium	mg/kg	10						-	-
Zinc	mg/kg	5			1,100 ¹		400,000	210	120
BTEX									
Naphthalene (VOC)	mg/kg	0.5			370			<0.5	<0.5
Benzene	mg/kg	0.1		4 4 6 10		95		<0.1	<0.1
Toluene	mg/kg	0.1				135		<0.1	<0.1
Ethylbenzene	mg/kg	0.1				185		<0.1	<0.1
Xylene (m & p)	mg/kg	0.2						<0.2	<0.2
Xylene (o)	mg/kg	0.1						<0.1	<0.1
Xylene Total	mg/kg	0.3				95		<0.3	<0.3
TRH									
C6-C9 Fraction	mg/kg	20						<20	<20
C10-C14 Fraction	mg/kg	20						<20	<20
C15-C28 Fraction	mg/kg	50						<50	<50
C29-C36 Fraction	mg/kg	50						67	<50
C10-C36 Fraction (Sum)	mg/kg	50						67	<50
C6-C10 Fraction (F1)	mg/kg	20	800					<20	<20
C6-C10 (F1 minus BTEX)	mg/kg	20		250 360 590		215		<20	<20
>C10-C16 Fraction (F2)	mg/kg	50	1,000			170		<50	<50
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50				170		<50	<50
>C16-C34 Fraction (F3)	mg/kg	100	5,000			2,500		<100	<100
>C34-C40 Fraction (F4)	mg/kg	100	10,000			6,600		<100	<100



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

							Field ID	BH14_0.15	BH15_0.1
							Domain	1	1
							Date	08 Sep 2023	08 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil		
>C10-C40 Fraction (Sum)	mg/kg	100						<100	<100
PAH									
Acenaphthene	mg/kg	0.5						<0.5	<0.5
Acenaphthylene	mg/kg	0.5						<0.5	<0.5
Anthracene	mg/kg	0.5						<0.5	<0.5
Benzo(a)anthracene	mg/kg	0.5						<0.5	<0.5
Benzo(a) pyrene	mg/kg	0.5				1.4		<0.5	<0.5
Benzo(b+j)fluoranthene	mg/kg	0.5						<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5						<0.5	<0.5
Benzo(k)fluoranthene	mg/kg	0.5						<0.5	<0.5
Chrysene	mg/kg	0.5						<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5						<0.5	<0.5
Fluoranthene	mg/kg	0.5						<0.5	<0.5
Fluorene	mg/kg	0.5						<0.5	<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5						<0.5	<0.5
Naphthalene	mg/kg	0.5			370		1,100 ³	<0.5	<0.5
Phenanthrene	mg/kg	0.5						<0.5	<0.5
Pyrene	mg/kg	0.5						<0.5	<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5			172 ³		40	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5			172 ³		40	0.6	0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5			172 ³		40	1.2	1.2
PAHs (Sum of total)	mg/kg	0.5					4,000	<0.5	<0.5
PCBs									
Arochlor 1016	mg/kg	0.1						<0.1	-
Arochlor 1221	mg/kg	0.1						<0.1	-
Arochlor 1232	mg/kg	0.1						<0.1	-
Arochlor 1242	mg/kg	0.1						<0.1	-
Arochlor 1248	mg/kg	0.1						<0.1	-
Arochlor 1254	mg/kg	0.1						<0.1	-
Arochlor 1260	mg/kg	0.1						<0.1	-
PCBs (Sum of total)	mg/kg	0.1					7	<0.1	-
Phenols									
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4						<0.4	-
2,4,5-Trichlorophenol	mg/kg	1						<1	-
2,4,6-Trichlorophenol	mg/kg	1						<1	-
2,4-Dichlorophenol	mg/kg	0.5						<0.5	-
2,4-Dimethylphenol	mg/kg	0.5						<0.5	-
2,4-Dinitrophenol	mg/kg	5						<5	-
2,6-Dichlorophenol	mg/kg	0.5						<0.5	-
2-Chlorophenol	mg/kg	0.5						<0.5	-
2-Methylphenol	mg/kg	0.2						<0.2	-
2-Nitrophenol	mg/kg	1						<1	-
4,6-Dinitro-2-methylphenol	mg/kg	0.5						<0.5	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20						<20	-
4-chloro-3-methylphenol	mg/kg	1						<1	-
4-Nitrophenol	mg/kg	5						<5	-
Cresol Total	mg/kg	0.5					25,000	<0.5	-
Pentachlorophenol	mg/kg	1					660	<1	-
Picloram	mg/kg	0.5					35,000	-	-
Tetrachlorophenols	mg/kg	10						<10	-
Phenol	mg/kg	0.5					240,000	<0.5	-
Phenols (Total Halogenated)	mg/kg	1						<1	-



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

			Field ID		BH14_0.15		BH15_0.1		
			Domain		1		1		
			Date		08 Sep 2023		08 Sep 2023		
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil		
Phenols (Total Non Halogenated)	mg/kg	20						<20	-
Particle Size									
% Clay*	%	1						-	-
Other									
Actril (Ioxnyl)	mg/kg	0.5						<0.5	-
Chlorinated Hydrocarbons									
Chlorinated hydrocarbons EPAVic	mg/kg	0.5						<0.5	-
Other chlorinated hydrocarbons EPAVic	mg/kg	0.5						<0.5	-
1,1,1,2-tetrachloroethane	mg/kg	0.5						<0.5	-
1,1,1-trichloroethane	mg/kg	0.5						<0.5	-
1,1,2-tetrachloroethane	mg/kg	0.5						<0.5	-
1,1,2-trichloroethane	mg/kg	0.5						<0.5	-
1,1-dichloroethane	mg/kg	0.5						<0.5	-
1,1-dichloroethene	mg/kg	0.5						<0.5	-
1,2,3-trichloropropane	mg/kg	0.5						<0.5	-
1,2-dichloroethane	mg/kg	0.5						<0.5	-
1,2-dichloropropane	mg/kg	0.5						<0.5	-
1,3-dichloropropane	mg/kg	0.5						<0.5	-
Bromochloromethane	mg/kg	0.5						<0.5	-
Bromodichloromethane	mg/kg	0.5						<0.5	-
Bromoform	mg/kg	0.5						<0.5	-
Carbon tetrachloride	mg/kg	0.5						<0.5	-
Chlorodibromomethane	mg/kg	0.5						<0.5	-
Chloroethane	mg/kg	0.5						<0.5	-
Chloroform	mg/kg	0.5						<0.5	-
Chloromethane	mg/kg	0.5						<0.5	-
cis-1,2-dichloroethene	mg/kg	0.5						<0.5	-
cis-1,3-dichloropropene	mg/kg	0.5						<0.5	-
Dibromomethane	mg/kg	0.5						<0.5	-
Dichloromethane	mg/kg	0.5						<0.5	-
Hexachlorobutadiene	mg/kg	0.5						<0.5	-
Trichloroethene	mg/kg	0.5						<0.5	-
Tetrachloroethene	mg/kg	0.5						<0.5	-
trans-1,2-dichloroethene	mg/kg	0.5						<0.5	-
trans-1,3-dichloropropene	mg/kg	0.5						<0.5	-
Vinyl chloride	mg/kg	0.5						<0.5	-
Halogenated Benzenes									
1,2,4-trichlorobenzene	mg/kg	0.05						<0.05	-
1,2-dichlorobenzene	mg/kg	0.5						<0.5	-
1,3-dichlorobenzene	mg/kg	0.5						<0.5	-
1,4-dichlorobenzene	mg/kg	0.5						<0.5	-
4-chlorotoluene	mg/kg	0.5						<0.5	-
Bromobenzene	mg/kg	0.5						<0.5	-
Chlorobenzene	mg/kg	0.5						<0.5	-
Hexachlorobenzene	mg/kg	0.05					80	<0.05	-
Halogenated Hydrocarbons									
1,2-dibromoethane	mg/kg	0.5						<0.5	-
Bromomethane	mg/kg	0.5						<0.5	-
Dichlorodifluoromethane	mg/kg	0.5						<0.5	-
Iodomethane	mg/kg	0.5						<0.5	-
Trichlorofluoromethane	mg/kg	0.5						<0.5	-



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

			Field ID		BH14_0.15		BH15_0.1		
			Domain		1		1		
			Date		08 Sep 2023		08 Sep 2023		
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil		
Herbicides									
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5					5,000	<0.5	-
2,4,5-TP (Silvex)	mg/kg	0.5						<0.5	-
Hedonal	mg/kg	0.5					9,000	<0.5	-
2,4-Dichlorprop	mg/kg	0.5						<0.5	-
4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	mg/kg	0.5						<0.5	-
Atrazine	mg/kg	0.2					2,500	<0.2	-
Dicamba	mg/kg	0.5						<0.5	-
Dinoseb	mg/kg	0.5						<0.5	-
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5					5,000	<0.5	-
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5					5,000	<0.5	-
Mecoprop	mg/kg	0.5					5,000	<0.5	-
MAH									
Total MAH	mg/kg	0.5						<0.5	-
1,2,4-trimethylbenzene	mg/kg	0.5						<0.5	-
1,3,5-trimethylbenzene	mg/kg	0.5						<0.5	-
Isopropylbenzene	mg/kg	0.5						<0.5	-
Styrene	mg/kg	0.5						<0.5	-
Organochlorine Pesticides									
Organochlorine pesticides EPAVic	mg/kg	0.1						<0.1	-
Other organochlorine pesticides EPAVic	mg/kg	0.1						<0.1	-
4,4-DDE	mg/kg	0.05						<0.05	-
a-BHC	mg/kg	0.05						<0.05	-
Aldrin	mg/kg	0.05						<0.05	-
Aldrin + Dieldrin	mg/kg	0.05					45	<0.05	-
b-BHC	mg/kg	0.05						<0.05	-
Chlordane	mg/kg	0.1					530	<0.1	-
d-BHC	mg/kg	0.05						<0.05	-
DDD	mg/kg	0.05						<0.05	-
DDT	mg/kg	0.05			640			<0.05	-
DDT+DDE+DDD	mg/kg	0.05					3,600	<0.05	-
Dieldrin	mg/kg	0.05						<0.05	-
Endosulfan I	mg/kg	0.05						<0.05	-
Endosulfan II	mg/kg	0.05						<0.05	-
Endosulfan sulphate	mg/kg	0.05						<0.05	-
Endrin	mg/kg	0.05					100	<0.05	-
Endrin aldehyde	mg/kg	0.05						<0.05	-
Endrin ketone	mg/kg	0.05						<0.05	-
g-BHC (Lindane)	mg/kg	0.05						<0.05	-
Heptachlor	mg/kg	0.05					50	<0.05	-
Heptachlor epoxide	mg/kg	0.05						<0.05	-
Methoxychlor	mg/kg	0.05					2,500	<0.05	-
Toxaphene	mg/kg	0.5					160	<0.5	-
Organic									
Total Organic Carbon	%							-	-
Organophosphorous Pesticides									
Tokuthion	mg/kg	0.2						-	-
Azinophos methyl	mg/kg	0.2						-	-
Bolstar (Sulprofos)	mg/kg	0.2						-	-



Table 2
Environmental Site Assessment
43 The Boulevard, Norlane
Analytical Results - NEPM

							Field ID	BH14_0.15	BH15_0.1
							Domain	1	1
							Date	08 Sep 2023	08 Sep 2023
	Unit	EQL	NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil	NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt	NEPM 2013 Table 1B(5) Generic EIL - Comm/Ind	NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil		
Chlorfenvinphos	mg/kg	0.2						-	-
Chlorpyrifos	mg/kg	0.2					2,000	<0.2	-
Chlorpyrifos-methyl	mg/kg	0.2						-	-
Coumaphos	mg/kg	2						-	-
Demeton-O	mg/kg	0.2						-	-
Demeton-S	mg/kg	0.2						-	-
Diazinon	mg/kg	0.2						-	-
Dichlorvos	mg/kg	0.2						-	-
Dimethoate	mg/kg	0.2						-	-
Disulfoton	mg/kg	0.2						-	-
Ethion	mg/kg	0.2						-	-
Ethoprop	mg/kg	0.2						-	-
Fenitrothion	mg/kg	0.2						-	-
Fensulfothion	mg/kg	0.2						-	-
Fenthion	mg/kg	0.2						-	-
EPN	mg/kg	0.2						-	-
Malathion	mg/kg	0.2						-	-
Merphos	mg/kg	0.2						-	-
Methyl parathion	mg/kg	0.2						-	-
Mevinphos (Phosdrin)	mg/kg	0.2						-	-
Monocrotophos	mg/kg	2						-	-
Naled (Dibrom)	mg/kg	0.2						-	-
Omethoate	mg/kg	2						-	-
Phorate	mg/kg	0.2						-	-
Pyrazophos	mg/kg	0.2						-	-
Ronnel	mg/kg	0.2						-	-
Terbufos	mg/kg	0.2						-	-
Trichloronate	mg/kg	0.2						-	-
Tetrachlorvinphos	mg/kg	0.2						-	-
Pesticides									
Bifenthrin	mg/kg	0.05					4,500	<0.05	-
Mirex	mg/kg	0.05					100	-	-
Parathion	mg/kg	0.2						-	-
Pirimiphos-methyl	mg/kg	0.2						-	-
Solvents									
Methyl Ethyl Ketone	mg/kg	0.5						<0.5	-
4-Methyl-2-pentanone	mg/kg	0.5						<0.5	-
Acetone	mg/kg	0.5						<0.5	-
Allyl chloride	mg/kg	0.5						<0.5	-
Carbon disulfide	mg/kg	0.5						<0.5	-

Environmental Standards

NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
 2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Silt
 2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
 2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil

¹ EIL Calculator (CEC: 19cmolc/kg dwt, pH: 8.6, OC: 0.1%, Clay: 3.7%)

NB: The EIL value for chromium is for chromium III only

² CRC CARE, Technical Report 10, Health screening levels for petroleum hydrocarbons in soil and groundwater

³ CRC CARE, Technical Report 39, Risk-based management and remediation guidance for benzo(a)pyrene



	Unit	EQL	Lab Report Number		RPD	1024571		RPD	1024571	
			Field ID	Field ID		BH10_3.8	D1_6923		EM2316280	EM2316280
			Date	Date		BH10_3.8	D1_6923		T1_6923	T1_6923
			Matrix Type	Matrix Type		08 Sep 2023	06 Sep 2023		08 Sep 2023	06 Sep 2023
			Soil	Soil	Soil	Soil	Soil	Soil	Soil	
Inorganics										
Conductivity (1:5 aqueous extract)	µS/cm	10								330
Moisture Content	%	1						13.3		
Cation Exchange Capacity	meq/100g	0.5								19
Cyanide (Free)	mg/kg	5								<5
Moisture Content (dried @ 103°C)	%	1	15	15	0	15				7.0
pH (1:5 aqueous extract)	-	0.1	7.8			7.8				
pH (Lab)	-	0.1								8.6
Metals										
Iron (%)	%	0.01								6.3
Arsenic	mg/kg	2	12	13	8	12	16	29		84
Beryllium	mg/kg	2								3.1
Boron	mg/kg	10								<20
Cadmium	mg/kg	0.4	1.2	<0.4	100	1.2	<1	18		<0.4
Chromium (hexavalent)	mg/kg	1								<1
Chromium (III+VI)	mg/kg	2	45	51	12	45	38	17		50
Cobalt	mg/kg	5								31
Copper	mg/kg	5	19	26	31	19	34	57		<5
Iron	mg/kg	20								63,000
Lead	mg/kg	5	100	150	40	100	100	0		5.8
Manganese	mg/kg	5								250
Mercury	mg/kg	0.1	1.4	1.0	33	1.4	0.8	55		<0.1
Nickel	mg/kg	2	35	38	8	35	30	15		24
Selenium	mg/kg	2								<2
Zinc	mg/kg	5	120	160	29	120	115	4		28
BTEX										
Naphthalene (VOC)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<1	0		<0.5
Benzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.2	0		<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0		<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0		<0.1
Xylene (m & p)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.5	0		<0.2
Xylene (o)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.5	0		<0.1
Xylene Total	mg/kg	0.3	<0.3	<0.3	0	<0.3	<0.5	0		<0.3
Total BTEX	mg/kg	0.2					<0.2			
TPH										
C6-C9 Fraction	mg/kg	10	<20	<20	0	<20	<10	0		<20
C10-C14 Fraction	mg/kg	20	<20	<20	0	<20	<50	0		<20
C15-C28 Fraction	mg/kg	50	66	71	7	66	100	41		<50
C29-C36 Fraction	mg/kg	50	60	96	46	60	130	74		<50
C10-C36 Fraction (Sum)	mg/kg	50	126	167	28	126	230	58		<50
TRH										
C6-C10 Fraction (F1)	mg/kg	10	<20	<20	0	<20	<10	0		<20
C6-C10 (F1 minus BTEX)	mg/kg	10	<20	<20	0	<20	<10	0		<20
>C10-C16 Fraction (F2)	mg/kg	50	<50	<50	0	<50	<50	0		<50
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50	<50	<50	0	<50	<50	0		<50
>C16-C34 Fraction (F3)	mg/kg	100	140	160	13	140	200	35		<100
>C34-C40 Fraction (F4)	mg/kg	100	<100	<100	0	<100	<100	0		<100
>C10-C40 Fraction (Sum)	mg/kg	50	140	160	13	140	200	35		<100
PAH										
Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Benzo(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Benzo(b,j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Fluorene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Naphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0.6	0.6	0	0.6	0.6	0		0.6
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	1.2	1.2	0	1.2	1.2	0		1.2
PAHs (Sum of total)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0		<0.5
PCBs										
Arochlor 1016	mg/kg	0.1								<0.1
Arochlor 1221	mg/kg	0.1								<0.1
Arochlor 1232	mg/kg	0.1								<0.1
Arochlor 1242	mg/kg	0.1								<0.1
Arochlor 1248	mg/kg	0.1								<0.1
Arochlor 1254	mg/kg	0.1								<0.1
Arochlor 1260	mg/kg	0.1								<0.1
PCBs (Sum of total)	mg/kg	0.1								<0.1
Phenols										
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4								<0.4
2-Methylphenol	mg/kg	0.2								<0.2
Pentachlorophenol	mg/kg	1								<1
Picloram	mg/kg	0.5								<0.5
Phenol	mg/kg	0.5								<0.5
Particle Size										
% Clay*	%	1								3.7
Halogenated Benzenes										
Hexachlorobenzene	mg/kg	0.05								<0.05
Herbicides										



	Unit	EQL	Lab Report Number		RPD	EM2316280		RPD	1024571	
			1024571	1024571		1024571	1024571		1024571	
			BH10_3.8	D1_6923		BH10_3.8	T1_6923		BH04_2.3	
			08 Sep 2023	06 Sep 2023		08 Sep 2023	06 Sep 2023		06 Sep 2023	
Matrix Type			Soil	Soil		Soil	Soil		Soil	
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5								<0.5
Hedonal	mg/kg	0.5								<0.5
Atrazine	mg/kg	0.2								<0.2
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5								<0.5
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5								<0.5
Mecoprop	mg/kg	0.5								<0.5
Organochlorine Pesticides										
4,4-DDE	mg/kg	0.05								<0.05
Aldrin	mg/kg	0.05								<0.05
Aldrin + Dieldrin	mg/kg	0.05								<0.05
Chlordane	mg/kg	0.1								<0.1
DDD	mg/kg	0.05								<0.05
DDT	mg/kg	0.05								<0.05
DDT+DDE+DDD	mg/kg	0.05								<0.05
Dieldrin	mg/kg	0.05								<0.05
Endosulfan I	mg/kg	0.05								<0.05
Endosulfan II	mg/kg	0.05								<0.05
Endosulfan sulphate	mg/kg	0.05								<0.05
Endrin	mg/kg	0.05								<0.05
Heptachlor	mg/kg	0.05								<0.05
Methoxychlor	mg/kg	0.05								<0.05
Toxaphene	mg/kg	0.5								<0.5
Organic										
Total Organic Carbon	%									0.1
Organophosphorous Pesticides										
Chlorpyrifos	mg/kg	0.2								<0.2
Pesticides										
Bifenthrin	mg/kg	0.05								<0.05
Mirex	mg/kg	0.05								<0.05



	Unit	EQL	Lab Report Number		1024571		EM2316280	
			Field ID		D2_6923		T2_6923	
			Date		06 Sep 2023		06 Sep 2023	
			Matrix Type		Soil		Soil	
			RPD	RPD				RPD
Inorganics								
Conductivity (1:5 aqueous extract)	µS/cm	10			330			
Moisture Content	%	1				6.5		
Cation Exchange Capacity	meq/100g	0.5			19			
Cyanide (Free)	mg/kg	5			<5			
Moisture Content (dried @ 103°C)	%	1	6.0	15	7.0			
pH (1:5 aqueous extract)	-	0.1						
pH (Lab)	-	0.1			8.6			
Metals								
Iron (%)	%	0.01			6.3			
Arsenic	mg/kg	2	79	6	84	79	6	
Beryllium	mg/kg	2			3.1			
Boron	mg/kg	10			<20			
Cadmium	mg/kg	0.4	<0.4	0	<0.4	<1	0	
Chromium (hexavalent)	mg/kg	1			<1			
Chromium (III+VI)	mg/kg	2	54	8	50	36	33	
Cobalt	mg/kg	5			31			
Copper	mg/kg	5	<5	0	<5	<5	0	
Iron	mg/kg	20			63,000			
Lead	mg/kg	5	5.4	7	5.8	5	15	
Manganese	mg/kg	5			250			
Mercury	mg/kg	0.1	<0.1	0	<0.1	<0.1	0	
Nickel	mg/kg	2	25	4	24	24	0	
Selenium	mg/kg	2			<2			
Zinc	mg/kg	5	29	4	28	25	11	
BTEX								
Naphthalene (VOC)	mg/kg	0.5	<0.5	0	<0.5	<1	0	
Benzene	mg/kg	0.1	<0.1	0	<0.1	<0.2	0	
Toluene	mg/kg	0.1	<0.1	0	<0.1	<0.5	0	
Ethylbenzene	mg/kg	0.1	<0.1	0	<0.1	<0.5	0	
Xylene (m & p)	mg/kg	0.2	<0.2	0	<0.2	<0.5	0	
Xylene (o)	mg/kg	0.1	<0.1	0	<0.1	<0.5	0	
Xylene Total	mg/kg	0.3	<0.3	0	<0.3	<0.5	0	
Total BTEX	mg/kg	0.2				<0.2		
TPH								
C6-C9 Fraction	mg/kg	10	<20	0	<20	<10	0	
C10-C14 Fraction	mg/kg	20	<20	0	<20	<50	0	
C15-C28 Fraction	mg/kg	50	<50	0	<50	<100	0	
C29-C36 Fraction	mg/kg	50	<50	0	<50	<100	0	
C10-C36 Fraction (Sum)	mg/kg	50	<50	0	<50	<50	0	
TRH								
C6-C10 Fraction (F1)	mg/kg	10	<20	0	<20	<10	0	
C6-C10 (F1 minus BTEX)	mg/kg	10	<20	0	<20	<10	0	
>C10-C16 Fraction (F2)	mg/kg	50	<50	0	<50	<50	0	
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50	<50	0	<50	<50	0	
>C16-C34 Fraction (F3)	mg/kg	100	<100	0	<100	<100	0	
>C34-C40 Fraction (F4)	mg/kg	100	<100	0	<100	<100	0	
>C10-C40 Fraction (Sum)	mg/kg	50	<100	0	<100	<50	0	
PAH								
Acenaphthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Acenaphthylene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Anthracene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Benzo(a)anthracene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Benzo(a)pyrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Chrysene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Fluoranthene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Fluorene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Naphthalene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Phenanthrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Pyrene	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0.6	0	0.6	0.6	0	
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	1.2	0	1.2	1.2	0	
PAHs (Sum of total)	mg/kg	0.5	<0.5	0	<0.5	<0.5	0	
PCBs								
Arochlor 1016	mg/kg	0.1			<0.1			
Arochlor 1221	mg/kg	0.1			<0.1			
Arochlor 1232	mg/kg	0.1			<0.1			
Arochlor 1242	mg/kg	0.1			<0.1			
Arochlor 1248	mg/kg	0.1			<0.1			
Arochlor 1254	mg/kg	0.1			<0.1			
Arochlor 1260	mg/kg	0.1			<0.1			
PCBs (Sum of total)	mg/kg	0.1			<0.1			
Phenols								
3&4-Methylphenol (m&p-cresol)	mg/kg	0.4			<0.4			
2-Methylphenol	mg/kg	0.2			<0.2			
Pentachlorophenol	mg/kg	1			<1			
Picloram	mg/kg	0.5			<0.5			
Phenol	mg/kg	0.5			<0.5			
Particle Size								
% Clay*	%	1			3.7			
Halogenated Benzenes								
Hexachlorobenzene	mg/kg	0.05			<0.05			
Herbicides								



		Lab Report Number	1024571		1024571	EM2316280	
		Field ID	D2_6923		BH04_2.3	T2_6923	
		Date	06 Sep 2023		06 Sep 2023	06 Sep 2023	
		Matrix Type	Soil	RPD	Soil	Soil	RPD
	Unit	EQL					
2,4,5-Trichlorophenoxy Acetic Acid	mg/kg	0.5			<0.5		
Hedonal	mg/kg	0.5			<0.5		
Atrazine	mg/kg	0.2			<0.2		
2-Methyl-4-chlorophenoxyacetic acid	mg/kg	0.5			<0.5		
2-Methyl-4-Chlorophenoxy Butanoic Acid	mg/kg	0.5			<0.5		
Mecoprop	mg/kg	0.5			<0.5		
Organochlorine Pesticides							
4,4-DDE	mg/kg	0.05			<0.05		
Aldrin	mg/kg	0.05			<0.05		
Aldrin + Dieldrin	mg/kg	0.05			<0.05		
Chlordane	mg/kg	0.1			<0.1		
DDD	mg/kg	0.05			<0.05		
DDT	mg/kg	0.05			<0.05		
DDT+DDE+DDD	mg/kg	0.05			<0.05		
Dieldrin	mg/kg	0.05			<0.05		
Endosulfan I	mg/kg	0.05			<0.05		
Endosulfan II	mg/kg	0.05			<0.05		
Endosulfan sulphate	mg/kg	0.05			<0.05		
Endrin	mg/kg	0.05			<0.05		
Heptachlor	mg/kg	0.05			<0.05		
Methoxychlor	mg/kg	0.05			<0.05		
Toxaphene	mg/kg	0.5			<0.5		
Organic							
Total Organic Carbon	%				0.1		
Organophosphorous Pesticides							
Chlorpyrifos	mg/kg	0.2			<0.2		
Pesticides							
Bifenthrin	mg/kg	0.05			<0.05		
Mirex	mg/kg	0.05			<0.05		



Table 4
 Environmental Site Assessment
 43 The Boulevard, Norlane
 Analytical Results - Field Blanks

Wathaurong Aboriginal Cooperative Limited

			Lab Report Number	1024571	1024571
			Field ID	TB_6923	RB_8923
			Date	06 Sep 2023	08 Sep 2023
			Matrix Type	Water	Water
	Unit	EQL			
BTEX					
Naphthalene (VOC)	mg/L	0.01			<0.01
Benzene	µg/L	1			<1
Toluene	µg/L	1			<1
Ethylbenzene	µg/L	1			<1
Xylene (m & p)	µg/L	2			<2
Xylene (o)	µg/L	1			<1
Xylene Total	µg/L	3			<3
TRH					
C6-C9 Fraction	µg/L	20			<20
C10-C14 Fraction	µg/L	50			<50
C15-C28 Fraction	µg/L	100			<100
C29-C36 Fraction	µg/L	100			<100
C10-C36 Fraction (Sum)	µg/L	100			<100
C6-C10 Fraction (F1)	µg/L	20		<20	<20
C6-C10 (F1 minus BTEX)	µg/L	20			<20
>C10-C16 Fraction (F2)	µg/L	50			<50
>C10-C16 Fraction (F2 minus Naphthalene)	µg/L	50			<50
>C16-C34 Fraction (F3)	µg/L	100			<100
>C34-C40 Fraction (F4)	µg/L	100			<100
>C10-C40 Fraction (Sum)	µg/L	100			<100

APPENDIX C – LABORATORY DOCUMENTS

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-025 - Site Soil Assessment	04	Thursday, 8 June 2023



CLIENT: SCAADA	TURNAROUND REQUIREMENTS : <small>(Standard TAT may be longer for some tests e.g. Ultra Trace Organics)</small>		5 Days		FOR LABORATORY USE ONLY (Circle)			
OFFICE: GEELONG	Quote: 200427SCAV		COC SEQUENCE NUMBER (Circle)		Custody Seal Intact?	Yes	No	N/A
PROJECT: J246707			COC 1 2 3 4 5 7		Free Ice / frozen ice bricks present upon receipt?	Yes	No	N/A
ORDER NUMBER: J246707	CONTACT PH: 0427 868 377		OF: 1 2 3 4 5 7		Random Sample Temperature on Receipt:	°C		
PROJECT MANAGER: Slaed Norris	SAMPLER MOBILE:		RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:		
SAMPLER: Slaed Norris	EDD FORMAT (or default):		Slaed Norris					
COC emailed to ALS? (YES / NO)			DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:		
Email Reports to : SCAADA@ESDAT.COM.AU ; SERVICES@SCAADA.COM.AU ; LABRESULTS@SCAADA.COM.AU ; slaed.norris@scaada.com.au			08/09/2023					
Email Invoice to : ACCOUNTS@SCAADA.COM.AU								

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

LAB USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)	CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) <small>Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).</small>											Additional Information			
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE <small>(refer to codes below)</small>	TOTAL BOTTLES	R21	R20	R20A	B10	B7	MISA MISA	pH	R1	B1	HOLD		
	BH01_0.6	6/09/2023	Soil	Glass Jar (Teflon)	1				X			X					
	BH01_1.4	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X	X					
	BH01_2.7	6/09/2023	Soil	Glass Jar (Teflon)	1				X								
	BH02_0.6	6/09/2023	Soil	Glass Jar (Teflon)	1			X									
	BH02_1.2	6/09/2023	Soil	Glass Jar (Teflon)	1										X		
	BH02_3.7	6/09/2023	Soil	Glass Jar (Teflon)	1										X		
	BH02_4.2	6/09/2023	Soil	Glass Jar (Teflon)	1				X			X					
	BH03_0.9	6/09/2023	Soil	Glass Jar (Teflon)	1				X								
	BH04_0.3	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X	X					
	BH04_2.3	6/09/2023	Soil	Glass Jar (Teflon)	1	X	X										
	BH05_1.0	6/09/2023	Soil	Glass Jar (Teflon)	1				X								
	BH05_1.4	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X						
TOTAL						12	1	1	1	5	3	3	4			2	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic;
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Date/Time: 8/9/23 @ 11:00 AM
Chilled Temp: 13.2 °C
Correction: T.M.
Final Temp:
Yes/No

#1024571



CLIENT: SCAADA		TURNAROUND REQUIREMENTS : 5 Days			FOR LABORATORY USE ONLY (Circle)		
OFFICE: GEELONG		(Standard TAT may be longer for some tests e.g., Ultra Trace Organics)			Custody Seal Intact? Yes No N/A		
PROJECT: J246707		Quote: 200427SCAV			Freeze / frozen ice bricks present upon receipt? Yes No N/A		
ORDER NUMBER: J246707		COC SEQUENCE NUMBER (Circle)			Random Sample Temperature on Receipt: °C		
PROJECT MANAGER: Slaed Norris		CONTACT PH: 0427 868 377			Other comment:		
SAMPLER: Slaed Norris		SAMPLER MOBILE:			RELINQUISHED BY:		RECEIVED BY:
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default):			Slaed Norris		
Email Reports to : SCAADA@ESDAT.COM.AU ; SERVICES@SCAADA.COM.AU ; LABRESULTS@SCAADA.COM.AU ; slaed.norris@scaada.com.au				DATE/TIME:		DATE/TIME:	
Email Invoice to : ACCOUNTS@SCAADA.COM.AU				08/09/2023			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

LAB USE ONLY	SAMPLE DETAILS		CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)										Additional Information		
	MATRIX: Solid(S) Water(W)			Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).												
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	R21	R20	R20A	B10	B7	M15	pH	R1	B1	HOLD	
	BH05_1.5	6/09/2023	Soil	Glass Jar (Teflon)	1									X		
	BH05_2.6	6/09/2023	Soil	Glass Jar (Teflon)	1		X		X							
	BH06_0.9	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X	X				
	BH06_1.6	6/09/2023	Soil	Glass Jar (Teflon)	1				X							
	BH07_0.5	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X	X				
	BH07_0.8	6/09/2023	Soil	Glass Jar (Teflon)	1										X	
	BH07_4.8	6/09/2023	Soil	Glass Jar (Teflon)	1										X	
	BH07_5.3	6/09/2023	Soil	Glass Jar (Teflon)	1										X	
	BH08_0.4	6/09/2023	Soil	Glass Jar (Teflon)	1				X							
	BH08_0.6	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X	X				
	BH08_1.0	6/09/2023	Soil	Glass Jar (Teflon)	1										X	
	BH08_1.6	6/09/2023	Soil	Glass Jar (Teflon)	1										X	
TOTAL					12		1		3	3	2	3	1		5	

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic;
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

8/9/23
Year No
Date/Time
Chilled Temp
Correction: Final Temp

Potential
in ASB
in all
Samples!





CLIENT: SCAADA	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)		5 Days		FOR LABORATORY USE ONLY (Circle)			
OFFICE: GEELONG	Quote: 200427SCAV		COC SEQUENCE NUMBER (Circle)		Custody Seal Intact?	Yes	No	N/A
PROJECT: J246707	ORDER NUMBER: J246707		coc 1 2 3 4 5 7		Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
PROJECT MANAGER	CONTACT PH		OP: 1 2 3 4 5 7		Random Sample Temperature on Receipt:	C		
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:			
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	Slaed Norris						
Email Reports to : SCAADA@ESDAT.COM.AU ; SERVICES@SCAADA.COM.AU ; LABRESULTS@SCAADA.COM.AU ; slaed.norris@scaada.com.au		DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:			
Email Invoice to : ACCOUNTS@SCAADA.COM.AU		08/09/2023						

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

LAB USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) <small>Where Metals are required, specify Total (unfilled bottle required) or Dissolved (field filtered bottle required).</small>											Additional Information		
	LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE <i>(refer to codes below)</i>	TOTAL BOTTLES	R21	R20	R20A	B10	B7	MT15A	pH	R1	B1	HOLD		
	BH08_2.4	6/09/2023	Soil	Glass Jar (Teflon)	1											X		
	BH09_0.4	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X	X						
	BH09_2.0	6/09/2023	Soil	Glass Jar (Teflon)	1											X		
	BH09_2.6	6/09/2023	Soil	Glass Jar (Teflon)	1											X		
	BH09_3.3	6/09/2023	Soil	Glass Jar (Teflon)	1											X		
	BH09_3.7	6/09/2023	Soil	Glass Jar (Teflon)	1											X		
	BH09_3.9	6/09/2023	Soil	Glass Jar (Teflon)	1											X		
	BH09_4.9	6/09/2023	Soil	Glass Jar (Teflon)	1				X			X						
	BH09_5.4	6/09/2023	Soil	Glass Jar (Teflon)	1					X	HS1	X						
	BH09_5.5	6/09/2023	Soil	Glass Jar (Teflon)	1											X		
	BH10_0.4	6/09/2023	Soil	Glass Jar (Teflon)	1				X			X						
	BH10_1.0	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X							
					TOTAL	12				2	3	2	4			7		

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulphuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulphuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulphuric Preserved Plastic;
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Date/Time: 8/9/23 @ 11:00 AM
 Chilled Temp: 13.2°C
 Correction: Final Temp:





CLIENT: SCAADA	TURNAROUND REQUIREMENTS : 5 Days		FOR LABORATORY USE ONLY (Circle):		
OFFICE: GEELONG	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics)		Custody Seal Intact? Yes No N/A		
PROJECT: J246707	Quote: 200427SCAV	COC SEQUENCE NUMBER (Circle)		Freeze/Thawed Samples present on receipt? Yes No N/A	
ORDER NUMBER: J246707		COC 1 2 3 4 5 7		Random Sample Temperature on Receipt? Yes No N/A	
PROJECT MANAGER:	CONTACT PH: 0427 868 377	OF: 1 2 3 4 5 7	Other Comments		
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	Slaed Norris			
Email Reports to : SCAADA@ESDAT.COM.AU ; SERVICES@SCAADA.COM.AU ; LABRESULTS@SCAADA.COM.AU ; slaed.norris@scaada.com.au		DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
Email Invoice to : ACCOUNTS@SCAADA.COM.AU		08/09/2023			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

LAB USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).											Additional Information
	LAB ID	SAMPLE ID	DATE / TIME		MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	R21	R20	R20A	B10	B7	M15 ^A	pH	R1	
	BH10_1.5	6/09/2023	Soil	Glass Jar (Teflon)	1						X	X				
	BH10_2.2	6/09/2023	Soil	Glass Jar (Teflon)	1											X
	BH10_2.5	6/09/2023	Soil	Glass Jar (Teflon)	1											X
	BH10_3.8	6/09/2023	Soil	Glass Jar (Teflon)	1					X	X					
	BH10_4.9	6/09/2023	Soil	Glass Jar (Teflon)	1		X									
	BH11_0.4	8/09/2023	Soil	Glass Jar (Teflon)	1					X	X					
	BH12_0.6	8/09/2023	Soil	Glass Jar (Teflon)	1		X							X		
	BH13_0.3	8/09/2023	Soil	Glass Jar (Teflon)	1								X			
	BH14_0.15	8/09/2023	Soil	Glass Jar (Teflon)	1			X								
	BH15_0.1	8/09/2023	Soil	Glass Jar (Teflon)	1					X	X					
	BH16_0.15	8/09/2023	Soil	Glass Jar (Teflon)	1											X
	D1_6923	6/09/2023	Soil	Glass Jar (Teflon)	1					X						
TOTAL					12		2	1		5	4	1				3

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic;
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Date/Time: 8/9/23 @ 11:00 AM
 Chilled Temp: 13°C
 Correction: 1
 Final Temp: 11





CLIENT: SCAADA	TURNAROUND REQUIREMENTS : 5 Days <small>(Standard TAT may be longer for some tests e.g. Ultra Trace Organics)</small>		FOR LABORATORY USE ONLY (Circle)		
OFFICE: GEELONG	Quote: 200427SCAV		Custody Seal Intact? Yes No N/A		
PROJECT: J246707	COC SEQUENCE NUMBER (Circle)		Free ice / frozen ice bricks present upon receipt? Yes No N/A		
ORDER NUMBER: J246707	COC 1 2 3 4 5 7		Random Sample Temperature on Receipt: °C		
PROJECT MANA	CONTACT P	OP: 1 2 3 4 5 7	Other comment:		
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	<i>Slaed Norris</i>			
Email Reports to : SCAADA@ESDAT.COM.AU ; SERVICES@SCAADA.COM.AU ; LABRESULTS@SCAADA.COM.AU ; slaed.norris@scaada.com.au		DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
Email Invoice to : ACCOUNTS@SCAADA.COM.AU		08/09/2023			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

LAB USE ONLY	SAMPLE DETAILS		CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)											Additional Information
	MATRIX: Solid(S) Water(W)			Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).											
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	R21	R20	R20A	B10	B7	pH	R1	B1	Asbestos	HOLD
	BH09_Debris0-1.0	6/09/2023	Debris	Zip Lock Bag	1										X
	BH10_Debris0-1.0	6/09/2023	Debris	Zip Lock Bag	1										X
	BH10_Debris1.0-1.5	6/09/2023	Debris	Zip Lock Bag	1										X
	BH13_Debris0.2	8/09/2023	Debris	Zip Lock Bag	1										X
	BH15_Debris<0.1	8/09/2023	Debris	Zip Lock Bag	1										X
TOTAL					5										S

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulphuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulphuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulphuric Preserved Plastic;
F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Date/Time: 8/9/23 @ 11:00 AM
 Chilled Temp: 13.2°C
 Correction: Final Temp:





SEND TO ALS PLEASE

CLIENT: SCAADA
 OFFICE: GEELONG
 PROJECT: J246707
 ORDER NUMBER: J246707
 PROJECT MAN
 SAMPLER:
 COC emailed to ALS? (YES / NO)
 Email Reports to : SCAADA@ESDAT.COM.AU ; SERVICES@SCAADA.COM.AU ; LABRESULTS@SCAADA.COM.AU;
 slaed.norris@scaada.com.au
 Email Invoice to : ACCOUNTS@SCAADA.COM.AU

TURNAROUND REQUIREMENTS :
 (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)

5 Days

COC SEQUENCE NUMBER
 (Circle)
 COC 1 2 3 4 5 7
 OF: 1 2 3 4 5 7

FOR LABORATORY USE ONLY (Circle)
 Custody Seal Intact? Yes No N/A
 Ring Ice/Frozen Ice Blocks present and receipt? Yes No N/A
 Random Sample Temperature on Receipt
 Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Slaed Norris			
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
08/09/2023			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

LAB USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).											Additional Information	
	LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	R21	R20	R20A	B10	B7	WDA	pH	R1	B1	Asbestos	HOLD	
	T1_6923	6/09/2023	Soil	Glass Jar (Teflon)	1													
	T2_6923	6/09/2023	Soil	Glass Jar (Teflon)	1													
TOTAL						2												

XXS-26

#1024571

8/9/23 @ 11:00 AM
 13790
 Date/Time: _____
 Vial No: _____
 Chilled Temp: _____
 Correction: _____
 Final Temp: _____



Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
 V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic;
 F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bar for Acid Sulphate Soils; B = Unpreserved Bar.

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

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

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	Christchurch	Tauranga
35 O'Rorke Road Penrose, Auckland 1061 Tel: +64 9 526 4551 IANZ# 1327	43 Detroit Drive Rolleston, Christchurch 7675 Tel: +64 3 343 5201 IANZ# 1290	1277 Cameron Road, Gate Pa, Tauranga 3112 Tel: +64 9 525 0568 IANZ# 1402

Sample Receipt Advice

Company name:	Scaada Group Services Pty Ltd
Contact name:	- (ALL REPORTS / SRA's)
Project name:	J246707
Project ID:	J246707
Turnaround time:	5 Day
Date/Time received	Sep 8, 2023 11:00 AM
Eurofins reference	1024571

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ 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:

Harry Bacalis on phone : +61 3 8564 5064 or by email: HarryBacalis@eurofins.com

Results will be delivered electronically via email to - Slaed Norris (ALL REPORTS / SRA's) - slaed.norris@scaada.com.au.

Note: A copy of these results will also be delivered to the general Scaada Group Services Pty Ltd email address.

SCAADA Environmental Pty Ltd
West 6 Federal Mills Park, 33 Mackey Street
North Geelong
VIC 3215



NATA Accredited
Accreditation Number 1261
Site Number 1254

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: - (ALL REPORTS / SRA's)
Report 1024571-AID
Project Name J246707
Project ID J246707
Received Date Sep 08, 2023
Date Reported Sep 18, 2023

Methodology:

Asbestos Fibre
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-
 containing material
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name J246707
Project ID J246707
Date Sampled Sep 06, 2023 to Sep 08, 2023
Report 1024571-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH16_DEBRIS0.2	23-Se0019489	Sep 08, 2023	Approximate Sample 1g / 10 x 5 x 2mm Sample consisted of: Cement sheet	Amosite asbestos detected. Organic fibres detected.
BH05_DEBRIS2.0	23-Se0019490	Sep 06, 2023	Approximate Sample 4g / 40 x 40 x 3mm Sample consisted of: Bituminous material	No asbestos detected. Organic fibres detected. No trace asbestos detected.
BH09_DEBRIS0.5	23-Se0019491	Sep 06, 2023	Approximate Sample 12g / 40 x 40 x 5mm Sample consisted of: Bituminous material	No asbestos detected. Organic fibres detected. No trace asbestos detected.
BH14_DEBRIS0.1	23-Se0019492	Sep 08, 2023	Approximate Sample 4g / 15 x 15 x 5mm Sample consisted of: Cement sheet	Chrysotile and amosite asbestos detected. Organic fibres detected.
BH06_DEBRIS4.4	23-Se0019493	Sep 06, 2023	Approximate Sample 12g / 40 x 40 x 7mm Sample consisted of: Bituminous material	No and no asbestos detected. Organic fibres detected. No trace asbestos detected.
BH06_DEBRIS4.5	23-Se0019494	Sep 06, 2023	Approximate Sample 7g / 27 x 22 x 10mm Sample consisted of: Cement sheet	Chrysotile asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Melbourne	Sep 08, 2023	Indefinite

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Company Name:	Scaada Group Services Pty Ltd	Order No.:		Received:	Sep 8, 2023 11:00 AM
Address:	West 6 Federal Mills Park, 33 Mackey Street North Geelong VIC 3215	Report #:	1024571	Due:	Sep 15, 2023
Project Name:	J246707	Phone:	0455 500 084	Priority:	5 Day
Project ID:	J246707	Fax:		Contact Name:	- Slaed Norris (ALL REPORTS /

Eurofins Analytical Services Manager :

Sample Detail						Asbestos Absence /Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OCP/OPPM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals : Metals M15 (ex HexC)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												X						
External Laboratory																		
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID													
1	BH01_0.6	Sep 06, 2023		Soil	M23-Se0019455			X	X			X						
2	BH01_1.4	Sep 06, 2023		Soil	M23-Se0019456			X	X				X				X	
3	BH01_2.7	Sep 06, 2023		Soil	M23-Se0019457				X			X						
4	BH02_0.6	Sep 06, 2023		Soil	M23-Se0019458				X									X
5	BH02_4.2	Sep 06, 2023		Soil	M23-Se0019459			X	X			X						
6	BH03_0.9	Sep 06, 2023		Soil	M23-Se0019460				X			X						
7	BH04_0.3	Sep 06, 2023		Soil	M23-Se0019461			X	X				X				X	
8	BH04_2.3	Sep 06, 2023		Soil	M23-Se0019462				X	X	X							
9	BH05_1.0	Sep 06, 2023		Soil	M23-Se0019463				X			X						
10	BH05_1.4	Sep 06, 2023		Soil	M23-Se0019464				X				X				X	
11	BH05_1.5	Sep 06, 2023		Soil	M23-Se0019465				X						X			
12	BH05_2.6	Sep 06, 2023		Soil	M23-Se0019466				X	X		X						

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Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X							
13	BH06_0.9	Sep 06, 2023	Soil			X		X				X			X	
14	BH06_1.6	Sep 06, 2023	Soil					X			X					
15	BH07_0.5	Sep 06, 2023	Soil			X		X				X			X	
16	BH08_0.4	Sep 06, 2023	Soil					X			X					
17	BH08_0.6	Sep 06, 2023	Soil			X		X				X				
18	BH09_0.4	Sep 06, 2023	Soil			X		X				X			X	
19	BH09_4.9	Sep 06, 2023	Soil			X		X			X					
20	BH09_5.4	Sep 06, 2023	Soil			X		X				X				
21	BH10_0.4	Sep 08, 2023	Soil			X		X			X					
22	BH10_1.0	Sep 08, 2023	Soil					X				X			X	
23	BH10_1.5	Sep 08, 2023	Soil			X		X				X				
24	BH10_3.8	Sep 08, 2023	Soil			X		X				X				
25	BH10_4.9	Sep 08, 2023	Soil					X	X							
26	BH11_0.4	Sep 08, 2023	Soil			X		X				X				
27	BH12_0.6	Sep 08, 2023	Soil					X	X							

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Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											X							
28	BH13_0.3	Sep 08, 2023		Soil	M23-Se0019482					X						X		
29	BH14_0.15	Sep 08, 2023		Soil	M23-Se0019483					X								X
30	BH15_0.1	Sep 08, 2023		Soil	M23-Se0019484		X			X			X					
31	D1_6923	Sep 06, 2023		Soil	M23-Se0019485					X			X					
32	D2_6923	Sep 06, 2023		Soil	M23-Se0019486					X			X					
33	RB_8923	Sep 08, 2023		Water	M23-Se0019487									X				
34	TB_6923	Sep 06, 2023		Water	M23-Se0019488			X										
35	BH16_DEBRI S0.2	Sep 08, 2023		Building Materials	M23-Se0019489	X												
36	BH05_DEBRI S2.0	Sep 06, 2023		Building Materials	M23-Se0019490	X												
37	BH09_DEBRI S0.5	Sep 06, 2023		Building Materials	M23-Se0019491	X												
38	BH14_DEBRI S0.1	Sep 08, 2023		Building Materials	M23-Se0019492	X												
39	BH06_DEBRI	Sep 06, 2023		Building	M23-Se0019493	X												

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Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X							
	S4.4		Materials													
40	BH06_DEBRI S4.5	Sep 06, 2023	Building Materials	M23-Se0019494	X											
41	BH02_1.2	Sep 06, 2023	Soil	M23-Se0019495		X										
42	BH02_3.7	Sep 06, 2023	Soil	M23-Se0019496		X										
43	BH07_0.8	Sep 06, 2023	Soil	M23-Se0019497		X										
44	BH07_4.8	Sep 06, 2023	Soil	M23-Se0019498		X										
45	BH07_5.3	Sep 06, 2023	Soil	M23-Se0019499		X										
46	BH08_1.0	Sep 06, 2023	Soil	M23-Se0019500		X										
47	BH08_1.6	Sep 06, 2023	Soil	M23-Se0019501		X										
48	BH08_2.4	Sep 06, 2023	Soil	M23-Se0019502		X										
49	BH09_2.0	Sep 06, 2023	Soil	M23-Se0019503		X										
50	BH09_2.6	Sep 06, 2023	Soil	M23-Se0019504		X										
51	BH09_3.3	Sep 06, 2023	Soil	M23-Se0019505		X										
52	BH09_3.7	Sep 06, 2023	Soil	M23-Se0019506		X										

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Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												X						
53	BH09_3.9	Sep 06, 2023		Soil	M23-Se0019507		X											
54	BH09_5.5	Sep 06, 2023		Soil	M23-Se0019508		X											
55	BH10_2.2	Sep 08, 2023		Soil	M23-Se0019509		X											
56	BH10_2.5	Sep 08, 2023		Soil	M23-Se0019510		X											
57	BH16_0.15	Sep 08, 2023		Soil	M23-Se0019511		X											
58	BH06_DEBRI S4.0-4.8	Sep 06, 2023		Building Materials	M23-Se0019512		X											
59	BH09_DEBRI S0-1.0	Sep 06, 2023		Building Materials	M23-Se0019513		X											
60	BH10_DEBRI S0-1.0	Sep 06, 2023		Building Materials	M23-Se0019514		X											
61	BH10_DEBRI S1.0-1.5	Sep 06, 2023		Building Materials	M23-Se0019515		X											
62	BH13_DEBRI S0.2	Sep 08, 2023		Building Materials	M23-Se0019516		X											
63	BH15_DEBRI S<0.1	Sep 08, 2023		Building Materials	M23-Se0019517		X											

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Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X							
64	BH06_3.8	Sep 06, 2023	Soil		X											
65	BH06_4.7	Sep 06, 2023	Soil		X											
Test Counts				6	25	15	1	32	4	1	10	15	1	2	7	2

Internal Quality Control Review and Glossary General

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

Holding Times

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

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/field	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

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

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

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

Terms

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

Comments**Sample Integrity**

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

Asbestos Counter/Identifier:

Senior Analyst-Asbestos

Authorised by:

Senior Analyst-Asbestos

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](#).

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

SCAADA Environmental Pty Ltd
 West 6 Federal Mills Park, 33 Mackey Street
 North Geelong
 VIC 3215



NATA Accredited
 Accreditation Number 1261
 Site Number 1254

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: - (ALL REPORTS / SRA's)

Report **1024571-S**
 Project name **J246707**
 Project ID **J246707**
 Received Date **Sep 08, 2023**

Client Sample ID			BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019455	M23- Se0019456	M23- Se0019457	M23- Se0019458
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	910	< 50	57
TRH C29-C36	50	mg/kg	< 50	170	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	1080	< 50	57
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	1300	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	1300	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	87	68	78	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019455	M23- Se0019456	M23- Se0019457	M23- Se0019458
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	60	81	58	50
p-Terphenyl-d14 (surr.)	1	%	72	94	125	52
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	0.27
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	0.27
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	0.27
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	83	-	88	76
Tetrachloro-m-xylene (surr.)	1	%	69	-	93	50
Bifenthrin	0.05	mg/kg	-	-	-	< 0.05
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	-
Bolstar	0.2	mg/kg	< 0.2	-	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	-
Coumaphos	2	mg/kg	< 2	-	< 2	-
Demeton-S	0.2	mg/kg	< 0.2	-	< 0.2	-
Demeton-O	0.2	mg/kg	< 0.2	-	< 0.2	-
Diazinon	0.2	mg/kg	< 0.2	-	< 0.2	-

Client Sample ID			BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019455	M23- Se0019456	M23- Se0019457	M23- Se0019458
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dichlorvos	0.2	mg/kg	< 0.2	-	< 0.2	-
Dimethoate	0.2	mg/kg	< 0.2	-	< 0.2	-
Disulfoton	0.2	mg/kg	< 0.2	-	< 0.2	-
EPN	0.2	mg/kg	< 0.2	-	< 0.2	-
Ethion	0.2	mg/kg	< 0.2	-	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.2	-	< 0.2	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	-
Fenitrothion	0.2	mg/kg	< 0.2	-	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.2	-	< 0.2	-
Fenthion	0.2	mg/kg	< 0.2	-	< 0.2	-
Malathion	0.2	mg/kg	< 0.2	-	< 0.2	-
Merphos	0.2	mg/kg	< 0.2	-	< 0.2	-
Methyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.2	-	< 0.2	-
Monocrotophos	2	mg/kg	< 2	-	< 2	-
Naled	0.2	mg/kg	< 0.2	-	< 0.2	-
Omethoate	2	mg/kg	< 2	-	< 2	-
Phorate	0.2	mg/kg	< 0.2	-	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	-
Pyrazophos	0.2	mg/kg	< 0.2	-	< 0.2	-
Ronnel	0.2	mg/kg	< 0.2	-	< 0.2	-
Terbufos	0.2	mg/kg	< 0.2	-	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	< 0.2	-
Tokuthion	0.2	mg/kg	< 0.2	-	< 0.2	-
Trichloronate	0.2	mg/kg	< 0.2	-	< 0.2	-
Triphenylphosphate (surr.)	1	%	73	-	98	-
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2
Heavy Metals						
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	8.3	7.6	-	7.7
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
Cyanide (free)	5	mg/kg	-	-	-	< 5
Cyanide (total)	5	mg/kg	-	-	-	< 5
Fluoride	100	mg/kg	-	-	-	< 100
Arsenic	2	mg/kg	3.8	32	100	7.1
Barium	10	mg/kg	-	160	-	47
Beryllium	2	mg/kg	-	< 2	-	< 2
Boron	10	mg/kg	-	^{G01} < 20	-	-
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	0.8
Chromium	5	mg/kg	53	95	37	34
Cobalt	5	mg/kg	-	14	-	< 5
Copper	5	mg/kg	15	83	6.0	66
Lead	5	mg/kg	12	89	6.8	71
Manganese	5	mg/kg	-	460	-	380
Mercury	0.1	mg/kg	0.1	4.0	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	-	-	< 5
Nickel	5	mg/kg	12	30	16	19
Selenium	2	mg/kg	-	< 2	-	< 2
Silver	2	mg/kg	-	-	-	< 2

Client Sample ID			BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019455	M23- Se0019456	M23- Se0019457	M23- Se0019458
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Tin	10	mg/kg	-	-	-	< 10
Vanadium	10	mg/kg	-	68	-	-
Zinc	5	mg/kg	44	450	25	140
Sample Properties						
% Moisture	1	%	1.3	10	13	3.8
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobutadiene	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
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

Client Sample ID			BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019455	M23- Se0019456	M23- Se0019457	M23- Se0019458
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	-	-	-	60
Toluene-d8 (surr.)	1	%	-	-	-	74
Chlorinated Hydrocarbons						
1.2.4-Trichlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchloroendate (surr.)	1	%	-	-	-	76
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	50
Triazines						
Atrazine	0.2	mg/kg	-	-	-	< 0.2
Acid Herbicides						
2.4-D	0.5	mg/kg	-	-	-	< 0.5
2.4-DB	0.5	mg/kg	-	-	-	< 0.5
2.4.5-T	0.5	mg/kg	-	-	-	< 0.5
2.4.5-TP	0.5	mg/kg	-	-	-	< 0.5
Actril (loxynil)	0.5	mg/kg	-	-	-	< 0.5
Dicamba	0.5	mg/kg	-	-	-	< 0.5
Dichlorprop	0.5	mg/kg	-	-	-	< 0.5
Dinitro-o-cresol	0.5	mg/kg	-	-	-	< 0.5
Dinoseb	0.5	mg/kg	-	-	-	< 0.5
MCPA	0.5	mg/kg	-	-	-	< 0.5
MCPB	0.5	mg/kg	-	-	-	< 0.5
Mecoprop	0.5	mg/kg	-	-	-	< 0.5
Warfarin (surr.)	1	%	-	-	-	135

Client Sample ID			BH01_0.6	BH01_1.4	BH01_2.7	BH02_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019455	M23- Se0019456	M23- Se0019457	M23- Se0019458
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2,4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2,4,5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2,4,6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2,6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Nitrophenol	1.0	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	%	-	-	-	58
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20

Client Sample ID			BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019459	M23- Se0019460	M23- Se0019461	M23- Se0019462
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019459	M23- Se0019460	M23- Se0019461	M23- Se0019462
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
BTEX						
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	130	54	66	76
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	50	95	62	78
p-Terphenyl-d14 (surr.)	1	%	58	53	59	121
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019459	M23- Se0019460	M23- Se0019461	M23- Se0019462
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	87	67	-	-
Tetrachloro-m-xylene (surr.)	1	%	55	59	-	-
Bifenthrin	0.05	mg/kg	-	-	-	< 0.05
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Coumaphos	2	mg/kg	< 2	< 2	-	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	-
EPN	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Monocrotophos	2	mg/kg	< 2	< 2	-	-
Naled	0.2	mg/kg	< 0.2	< 0.2	-	-
Omethoate	2	mg/kg	< 2	< 2	-	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	57	50	-	-
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2

Client Sample ID			BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019459	M23- Se0019460	M23- Se0019461	M23- Se0019462
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	7.5	-	6.8	-
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
Cyanide (free)	5	mg/kg	-	-	-	< 5
% Clay	1	%	-	-	-	3.7
Conductivity (1:5 aqueous extract at 25 °C as rec.)	10	uS/cm	-	-	-	330
pH (units)(1:5 soil:CaCl2 extract at 25 °C as rec.)	0.1	pH Units	-	-	-	8.6
Total Organic Carbon	0.1	%	-	-	-	0.1
Heavy Metals						
Arsenic	2	mg/kg	8.6	< 2	170	84
Barium	10	mg/kg	-	-	110	-
Beryllium	2	mg/kg	-	-	3.2	3.1
Boron	10	mg/kg	-	-	^{G01} < 20	^{G01} < 20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	63	< 5	86	50
Cobalt	5	mg/kg	-	-	26	31
Copper	5	mg/kg	39	66	6.2	< 5
Iron	20	mg/kg	-	-	-	63000
Lead	5	mg/kg	17	9.8	11	5.8
Manganese	5	mg/kg	-	-	160	250
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	62	11	52	24
Selenium	2	mg/kg	-	-	2.1	< 2
Vanadium	10	mg/kg	-	-	400	-
Zinc	5	mg/kg	150	59	37	28
Sample Properties						
% Moisture	1	%	14	2.5	10	7.0
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	76
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	112
Triazines						
Atrazine	0.2	mg/kg	-	-	-	< 0.2
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	-	-	-	< 0.5
2,4-D	0.5	mg/kg	-	-	-	< 0.5
2,4,5-T	0.5	mg/kg	-	-	-	< 0.5
MCPA	0.5	mg/kg	-	-	-	< 0.5
MCPB	0.5	mg/kg	-	-	-	< 0.5
Mecoprop	0.5	mg/kg	-	-	-	< 0.5
Warfarin (surr.)	1	%	-	-	-	115

Client Sample ID			BH02_4.2	BH03_0.9	BH04_0.3	BH04_2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019459	M23- Se0019460	M23- Se0019461	M23- Se0019462
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Mirex	0.05	mg/kg	-	-	-	< 0.05
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
Aldrin	0.05	mg/kg	-	-	-	< 0.05
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	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
Dibutylchloroendate (surr.)	1	%	-	-	-	76
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	112
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	93
Heavy Metals						
Iron (%)	0.01	%	-	-	-	6.3
Cation Exchange Capacity						
Cation Exchange Capacity*	0.5	meq/100g	-	-	-	19

Client Sample ID			BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019463	M23- Se0019464	M23- Se0019465	M23- Se0019466
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	25	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	180	< 50	< 50	74
TRH C29-C36	50	mg/kg	400	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	605	< 50	< 50	74
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	510	< 100	< 100	130
TRH >C34-C40	100	mg/kg	610	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	1120	< 100	< 100	130

Client Sample ID			BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019463	M23- Se0019464	M23- Se0019465	M23- Se0019466
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	51	85	-	68
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	74	86	80	79
p-Terphenyl-d14 (surr.)	1	%	70	57	76	67
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05

Client Sample ID			BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019463	M23- Se0019464	M23- Se0019465	M23- Se0019466
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	60	-	101	70
Tetrachloro-m-xylene (surr.)	1	%	69	-	98	96
Bifenthrin	0.05	mg/kg	-	-	-	< 0.05
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Coumaphos	2	mg/kg	< 2	-	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	-	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	-	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	-	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	-	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	-	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	-	-	< 0.2
EPN	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	-	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	-	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Merphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	-	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Monocrotophos	2	mg/kg	< 2	-	-	< 2
Naled	0.2	mg/kg	< 0.2	-	-	< 0.2
Omethoate	2	mg/kg	< 2	-	-	< 2
Phorate	0.2	mg/kg	< 0.2	-	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	-	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	-	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	-	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	83	-	-	81

Client Sample ID			BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019463	M23- Se0019464	M23- Se0019465	M23- Se0019466
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	-	-	7.5	-
Chromium (hexavalent)	1	mg/kg	-	-	< 1	< 1
Cyanide (free)	5	mg/kg	-	-	-	< 5
Cyanide (total)	5	mg/kg	-	-	< 5	-
Fluoride	100	mg/kg	-	-	< 100	-
Heavy Metals						
Arsenic	2	mg/kg	26	6.7	2.8	18
Barium	10	mg/kg	-	54	-	-
Beryllium	2	mg/kg	-	< 2	-	< 2
Boron	10	mg/kg	-	^{G01} < 20	-	^{G01} < 20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	800	99	27	57
Cobalt	5	mg/kg	-	< 5	-	17
Copper	5	mg/kg	1600	42	11	17
Lead	5	mg/kg	6800	18	7.6	52
Manganese	5	mg/kg	-	1000	-	260
Mercury	0.1	mg/kg	2.1	< 0.1	< 0.1	0.2
Molybdenum	5	mg/kg	-	-	< 5	-
Nickel	5	mg/kg	110	17	5.7	44
Selenium	2	mg/kg	-	< 2	< 2	< 2
Silver	2	mg/kg	-	-	< 2	-
Tin	10	mg/kg	-	-	< 10	-
Vanadium	10	mg/kg	-	15	-	-
Zinc	5	mg/kg	1000	180	19	100
Sample Properties						
% Moisture	1	%	12	3.8	3.2	21
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	< 0.5	-
Hexachlorobutadiene	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	-
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	-

Client Sample ID			BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019463	M23- Se0019464	M23- Se0019465	M23- Se0019466
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	-	-	58	-
Toluene-d8 (surr.)	1	%	-	-	68	-
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	< 0.5	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	-	-	101	70
Tetrachloro-m-xylene (surr.)	1	%	-	-	98	96

Client Sample ID			BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019463	M23- Se0019464	M23- Se0019465	M23- Se0019466
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Triazines						
Atrazine	0.2	mg/kg	-	-	-	< 0.2
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2,4,5-Trichlorophenol	1	mg/kg	-	-	< 1	-
2,4,6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2,6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4,6-dinitrophenol	20	mg/kg	-	-	< 20	-
2-Methyl-4,6-dinitrophenol	5	mg/kg	-	-	< 5	-
2-Nitrophenol	1.0	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	%	-	-	99	-
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	-
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	-	-	-	< 0.5
2,4-D	0.5	mg/kg	-	-	-	< 0.5
2,4,5-T	0.5	mg/kg	-	-	-	< 0.5
MCPA	0.5	mg/kg	-	-	-	< 0.5
MCPB	0.5	mg/kg	-	-	-	< 0.5
Mecoprop	0.5	mg/kg	-	-	-	< 0.5
Warfarin (surr.)	1	%	-	-	-	124
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Mirex	0.05	mg/kg	-	-	-	< 0.05
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
Aldrin	0.05	mg/kg	-	-	-	< 0.05
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			BH05_1.0	BH05_1.4	BH05_1.5	BH05_2.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019463	M23- Se0019464	M23- Se0019465	M23- Se0019466
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
NEPM 2013 Organochlorine Pesticides						
Toxaphene	0.5	mg/kg	-	-	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	-	-	70
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	96
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	98

Client Sample ID			BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019467	M23- Se0019468	M23- Se0019469	M23- Se0019470
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	540	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	250	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	790	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	720	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	820	< 100	< 100	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	53	61	50	80
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019467	M23- Se0019468	M23- Se0019469	M23- Se0019470
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	65	53	65	66
p-Terphenyl-d14 (surr.)	1	%	78	103	71	77
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	< 0.05
a-HCH	0.05	mg/kg	-	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	-	< 0.05
b-HCH	0.05	mg/kg	-	< 0.05	-	< 0.05
d-HCH	0.05	mg/kg	-	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	-	< 0.05
Toxaphene	0.5	mg/kg	-	< 0.5	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	< 0.1
Dibutylchloroendate (surr.)	1	%	-	86	-	77
Tetrachloro-m-xylene (surr.)	1	%	-	117	-	72
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	< 0.2

Client Sample ID			BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019467	M23- Se0019468	M23- Se0019469	M23- Se0019470
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	< 0.2
Coumaphos	2	mg/kg	-	< 2	-	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	-	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	-	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	-	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	-	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	-	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	-	< 0.2
EPN	0.2	mg/kg	-	< 0.2	-	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	-	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	-	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	-	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	-	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	-	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	-	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	-	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Monocrotophos	2	mg/kg	-	< 2	-	< 2
Naled	0.2	mg/kg	-	< 0.2	-	< 0.2
Omethoate	2	mg/kg	-	< 2	-	< 2
Phorate	0.2	mg/kg	-	< 0.2	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	-	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	-	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	-	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	-	< 0.2
Triphenylphosphate (surr.)	1	%	-	66	-	77
pH (1:5 Aqueous extract at 25 °C as rec.)						
	0.1	pH Units	5.4	-	8.2	-
Heavy Metals						
Arsenic	2	mg/kg	53	2.5	7.4	4.5
Barium	10	mg/kg	250	-	640	-
Beryllium	2	mg/kg	< 2	-	< 2	-
Boron	10	mg/kg	26	-	^{G01} < 20	-
Cadmium	0.4	mg/kg	0.5	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	77	63	190	58
Cobalt	5	mg/kg	24	-	< 5	-
Copper	5	mg/kg	130	13	26	20
Lead	5	mg/kg	170	13	11	13
Manganese	5	mg/kg	770	-	6500	-
Mercury	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	110	42	33	18
Selenium	2	mg/kg	< 2	-	< 2	-
Vanadium	10	mg/kg	52	-	19	-
Zinc	5	mg/kg	240	44	130	29

Client Sample ID			BH06_0.9	BH06_1.6	BH07_0.5	BH08_0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019467	M23- Se0019468	M23- Se0019469	M23- Se0019470
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	13	13	1.5	2.7

Client Sample ID			BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019471	M23- Se0019472	M23- Se0019473	M23- Se0019474
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	260	140
TRH C29-C36	50	mg/kg	< 50	< 50	310	120
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	570	260
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	500	240
TRH >C34-C40	100	mg/kg	< 100	< 100	100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	600	240
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	112	70	109	83
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019471	M23- Se0019472	M23- Se0019473	M23- Se0019474
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	60	68	74	79
p-Terphenyl-d14 (surr.)	1	%	51	87	94	87
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-HCH	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-HCH	0.05	mg/kg	-	-	< 0.05	-
d-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	-
g-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	-
Dibutylchlorendate (surr.)	1	%	-	-	52	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	104	-
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	-

Client Sample ID			BH08_0.6	BH09_0.4	BH09_4.9	BH09_5.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019471	M23- Se0019472	M23- Se0019473	M23- Se0019474
Date Sampled			Sep 06, 2023	Sep 06, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	-	-	70	-
pH (1:5 Aqueous extract at 25 °C as rec.)						
	0.1	pH Units	7.3	7.2	8.4	8.9
Heavy Metals						
Arsenic	2	mg/kg	4.6	7.0	24	23
Barium	10	mg/kg	-	320	-	-
Beryllium	2	mg/kg	-	< 2	-	-
Boron	10	mg/kg	-	19	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	4.2
Chromium	5	mg/kg	50	50	73	45
Cobalt	5	mg/kg	-	18	-	-
Copper	5	mg/kg	20	52	130	37
Lead	5	mg/kg	33	160	160	99
Manganese	5	mg/kg	-	440	-	-
Mercury	0.1	mg/kg	0.2	< 0.1	0.9	< 0.1
Nickel	5	mg/kg	29	49	120	45
Selenium	2	mg/kg	-	< 2	-	-
Vanadium	10	mg/kg	-	52	-	-
Zinc	5	mg/kg	56	630	300	4500
Sample Properties						
% Moisture	1	%	9.4	13	23	15

Client Sample ID			BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019475	M23- Se0019476	M23- Se0019477	M23- Se0019478
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	220	< 50	66
TRH C29-C36	50	mg/kg	< 50	200	< 50	60
TRH C10-C36 (Total)	50	mg/kg	< 50	420	< 50	126
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	340	< 100	140
TRH >C34-C40	100	mg/kg	< 100	180	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	520	< 100	140
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	56	60	102	54
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	1.2	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.5	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.8	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	1.0	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	1.0	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	0.9	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	0.9	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	1.6	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	0.8	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	1.9	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	8.7	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	80	76	61	58
p-Terphenyl-d14 (surr.)	1	%	86	87	71	74

Client Sample ID			BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019475	M23- Se0019476	M23- Se0019477	M23- Se0019478
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-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	-	-	-
g-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	-	-	-
Dibutylchloroendate (surr.)	1	%	66	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	53	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			BH10_0.4	BH10_1.0	BH10_1.5	BH10_3.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019475	M23- Se0019476	M23- Se0019477	M23- Se0019478
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	68	-	-	-
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	6.6	-	7.3	7.8
Heavy Metals						
Arsenic	2	mg/kg	64	30	15	12
Barium	10	mg/kg	-	140	-	-
Beryllium	2	mg/kg	-	< 20	-	-
Boron	10	mg/kg	-	^{G01} < 100	-	-
Cadmium	0.4	mg/kg	45	7.9	< 0.4	1.2
Chromium	5	mg/kg	340	87	53	45
Cobalt	5	mg/kg	-	< 50	-	-
Copper	5	mg/kg	57000	18000	34	19
Lead	5	mg/kg	8000	4000	20	100
Manganese	5	mg/kg	-	360	-	-
Mercury	0.1	mg/kg	< 1	< 1	< 0.1	1.4
Nickel	5	mg/kg	500	160	41	35
Selenium	2	mg/kg	-	< 20	-	-
Vanadium	10	mg/kg	-	< 100	-	-
Zinc	5	mg/kg	19000	3300	80	120
Sample Properties						
% Moisture	1	%	5.7	8.1	16	15

Client Sample ID			BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019479	M23- Se0019480	M23- Se0019481	M23- Se0019482
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	40	59	< 20	25
TRH C15-C28	50	mg/kg	630	260	< 50	220
TRH C29-C36	50	mg/kg	550	210	< 50	84
TRH C10-C36 (Total)	50	mg/kg	1220	529	< 50	329
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019479	M23- Se0019480	M23- Se0019481	M23- Se0019482
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	56	75	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	56	75	< 50	< 50
TRH >C16-C34	100	mg/kg	1100	360	< 100	270
TRH >C34-C40	100	mg/kg	310	140	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	1466	575	< 100	270
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	62	116	61	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.8	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.3	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	0.9	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	1.0	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	6.4	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	76	56	59	91
p-Terphenyl-d14 (surr.)	1	%	112	69	132	55
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-HCH	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-HCH	0.05	mg/kg	-	-	-	< 0.05
d-HCH	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019479	M23- Se0019480	M23- Se0019481	M23- Se0019482
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-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
Dibutylchloroendate (surr.)	1	%	-	-	-	78
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	51
Bifenthrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	< 0.2	-	< 0.2	-
Other Parameters						
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	-	3.8	-	8.1
Chromium (hexavalent)	1	mg/kg	< 1	-	< 1	< 1
Cyanide (free)	5	mg/kg	< 5	-	< 5	-
Cyanide (total)	5	mg/kg	-	-	-	< 5
Fluoride	100	mg/kg	-	-	-	< 100
Heavy Metals						
Arsenic	2	mg/kg	38	57	4.9	31
Beryllium	2	mg/kg	< 2	-	< 2	-
Boron	10	mg/kg	43	-	^{G01} < 20	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	44	270	45	120
Cobalt	5	mg/kg	18	-	14	-
Copper	5	mg/kg	130	190	10	94
Lead	5	mg/kg	2600	70	8.4	45
Manganese	5	mg/kg	460	-	260	-
Mercury	0.1	mg/kg	0.9	0.2	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	-	-	6.2
Nickel	5	mg/kg	58	170	28	70
Selenium	2	mg/kg	< 2	-	< 2	< 2
Silver	2	mg/kg	-	-	-	< 2
Tin	10	mg/kg	-	-	-	530
Zinc	5	mg/kg	310	690	17	55
Sample Properties						
% Moisture	1	%	20	13	10	6.7

Client Sample ID			BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019479	M23- Se0019480	M23- Se0019481	M23- Se0019482
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
Hexachlorobutadiene	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
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

Client Sample ID			BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019479	M23- Se0019480	M23- Se0019481	M23- Se0019482
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	-	-	-	75
Toluene-d8 (surr.)	1	%	-	-	-	90
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	68	-	70	78
Tetrachloro-m-xylene (surr.)	1	%	142	-	116	51
Triazines						
Atrazine	0.2	mg/kg	< 0.2	-	< 0.2	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Nitrophenol	1.0	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	%	-	-	-	57
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20

Client Sample ID			BH10_4.9	BH11_0.4	BH12_0.6	BH13_0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019479	M23- Se0019480	M23- Se0019481	M23- Se0019482
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 08, 2023	Sep 08, 2023
Test/Reference	LOR	Unit				
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	< 0.5	-	< 0.5	-
2,4-D	0.5	mg/kg	< 0.5	-	< 0.5	-
2,4,5-T	0.5	mg/kg	< 0.5	-	< 0.5	-
MCPA	0.5	mg/kg	< 0.5	-	< 0.5	-
MCPB	0.5	mg/kg	< 0.5	-	< 0.5	-
Mecoprop	0.5	mg/kg	< 0.5	-	< 0.5	-
Warfarin (surr.)	1	%	130	-	110	-
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Mirex	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Toxaphene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchloroendate (surr.)	1	%	68	-	70	-
Tetrachloro-m-xylene (surr.)	1	%	142	-	116	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	-
Pentachlorophenol	1	mg/kg	< 1	-	< 1	-
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenol-d6 (surr.)	1	%	97	-	76	-

Client Sample ID			BH14_0.15	BH15_0.1	D1_6923	D2_6923
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019483	M23- Se0019484	M23- Se0019485	M23- Se0019486
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	71	< 50
TRH C29-C36	50	mg/kg	67	< 50	96	< 50
TRH C10-C36 (Total)	50	mg/kg	67	< 50	167	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			BH14_0.15	BH15_0.1	D1_6923	D2_6923
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019483	M23- Se0019484	M23- Se0019485	M23- Se0019486
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	160	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	160	< 100
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	75	83	88
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	50	56	87	84
p-Terphenyl-d14 (surr.)	1	%	64	70	105	81
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4,4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4,4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			BH14_0.15	BH15_0.1	D1_6923	D2_6923
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019483	M23- Se0019484	M23- Se0019485	M23- Se0019486
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-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	-	-	-
Dibutylchloroendate (surr.)	1	%	83	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	61	-	-	-
Bifenthrin	0.05	mg/kg	< 0.05	-	-	-
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Other Parameters						
pH (1:5 Aqueous extract at 25 °C as rec.)	0.1	pH Units	8.1	8.4	-	-
Chromium (hexavalent)	1	mg/kg	< 1	-	-	-
Cyanide (free)	5	mg/kg	< 5	-	-	-
Cyanide (total)	5	mg/kg	< 5	-	-	-
Fluoride	100	mg/kg	< 100	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	12	7.0	13	79
Barium	10	mg/kg	200	-	-	-
Beryllium	2	mg/kg	< 2	-	-	-
Cadmium	0.4	mg/kg	1.2	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	52	41	51	54
Cobalt	5	mg/kg	12	-	-	-
Copper	5	mg/kg	71	38	26	< 5
Lead	5	mg/kg	110	150	150	5.4
Manganese	5	mg/kg	490	-	-	-
Mercury	0.1	mg/kg	0.2	< 0.1	1.0	< 0.1
Molybdenum	5	mg/kg	6.5	-	-	-
Nickel	5	mg/kg	42	29	38	25
Selenium	2	mg/kg	< 2	-	-	-
Silver	2	mg/kg	< 2	-	-	-
Tin	10	mg/kg	24	-	-	-
Zinc	5	mg/kg	210	120	160	29
Sample Properties						
% Moisture	1	%	8.1	8.9	15	6.0

Client Sample ID			BH14_0.15	BH15_0.1	D1_6923	D2_6923
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019483	M23- Se0019484	M23- Se0019485	M23- Se0019486
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	-	-	-
Hexachlorobutadiene	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	-	-	-
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	-	-	-

Client Sample ID			BH14_0.15	BH15_0.1	D1_6923	D2_6923
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019483	M23- Se0019484	M23- Se0019485	M23- Se0019486
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 06, 2023	Sep 06, 2023
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	56	-	-	-
Toluene-d8 (surr.)	1	%	131	-	-	-
Chlorinated Hydrocarbons						
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchloroendate (surr.)	1	%	83	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	61	-	-	-
Triazines						
Atrazine	0.2	mg/kg	< 0.2	-	-	-
Acid Herbicides						
2.4-D	0.5	mg/kg	< 0.5	-	-	-
2.4-DB	0.5	mg/kg	< 0.5	-	-	-
2.4.5-T	0.5	mg/kg	< 0.5	-	-	-
2.4.5-TP	0.5	mg/kg	< 0.5	-	-	-
Actril (loxynil)	0.5	mg/kg	< 0.5	-	-	-
Dicamba	0.5	mg/kg	< 0.5	-	-	-
Dichlorprop	0.5	mg/kg	< 0.5	-	-	-
Dinitro-o-cresol	0.5	mg/kg	< 0.5	-	-	-
Dinoseb	0.5	mg/kg	< 0.5	-	-	-
MCPA	0.5	mg/kg	< 0.5	-	-	-
MCPB	0.5	mg/kg	< 0.5	-	-	-
Mecoprop	0.5	mg/kg	< 0.5	-	-	-
Warfarin (surr.)	1	%	64	-	-	-
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			BH14_0.15	BH15_0.1	D1_6923	D2_6923
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M23- Se0019483	M23- Se0019484	M23- Se0019485	M23- Se0019486
Date Sampled			Sep 08, 2023	Sep 08, 2023	Sep 06, 2023	Sep 06, 2023
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	1.0	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	%	60	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Sep 13, 2023	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Sep 13, 2023	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Sep 13, 2023	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Sep 13, 2023	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)	Melbourne	Sep 13, 2023	14 Days
Organophosphorus Pesticides - Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)	Melbourne	Sep 13, 2023	14 Days
pH (1:5 Aqueous extract at 25 °C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Sep 12, 2023	7 Days
Chromium (hexavalent) - Method: LTM-INO-4100 Hexavalent Chromium by Spectrometric detection	Melbourne	Sep 13, 2023	28 Days
Cyanide (free) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Sep 13, 2023	14 Days
Cyanide (total) - Method: LTM-INO-4020 Total Free WAD Cyanide by CFA	Melbourne	Sep 11, 2023	14 Days
Fluoride - Method: LTM-INO-4150 Determination of Total Fluoride PART A – CIC	Melbourne	Sep 12, 2023	28 Days
Metals (Ag/As/B/Be/Cd/Cr/Co/Cu/Hg/Mn/Mo/Ni/Pb/Se/Sn/Zn) - Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)	Melbourne	Sep 11, 2023	28 Days
Volatile Organics - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)	Melbourne	Sep 11, 2023	7 Days
Chlorinated Hydrocarbons - Method: USEPA 8121 Chlorinated Hydrocarbons	Melbourne	Sep 11, 2023	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)	Melbourne	Sep 13, 2023	28 Days
Triazines - Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS	Melbourne	Sep 13, 2023	14 Days
Acid Herbicides - Method: LTM-ORG-2180 Phenoxy Acid Herbicides	Melbourne	Sep 11, 2023	14 Days
Phenols (Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Sep 11, 2023	14 Days
Phenols (non-Halogenated) - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Sep 11, 2023	14 Days
Eurofins Suite B1			
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Melbourne	Sep 13, 2023	14 Days
NEPM Screen for Soil Classification			
% Clay - Method: LTM-GEN-7040	Brisbane	Sep 12, 2023	14 Days
Conductivity (1:5 aqueous extract at 25 °C as rec.) - Method: LTM-INO-4030 Conductivity	Melbourne	Sep 11, 2023	7 Days
pH (units)(1:5 soil:CaCl2 extract at 25 °C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Sep 11, 2023	7 Days
Total Organic Carbon - Method: LTM-INO-4060 Total Organic Carbon in water and soil	Melbourne	Sep 12, 2023	28 Days
Heavy Metals	Melbourne	Sep 13, 2023	28 Days

Description	Testing Site	Extracted	Holding Time
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS Cation Exchange Capacity	Melbourne	Sep 13, 2023	28 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage Eurofins Suite B7			
Metals M8	Melbourne	Sep 13, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS - Method:			
NEPM Metals : Metals M15 (ex HexCr)	Melbourne	Sep 13, 2023	28 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury) NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding Methyl Mercury/PBDE			
NEPM 2013 Metals : Metals M12	Melbourne	Sep 13, 2023	28 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
NEPM 2013 Acid Herbicides	Melbourne	Sep 13, 2023	14 Days
- Method: MGT 530			
NEPM 2013 Organochlorine Pesticides	Melbourne	Sep 13, 2023	14 Days
- Method: USEPA 8081 Organochlorine Pesticides			
NEPM 2013 Phenols	Melbourne	Sep 13, 2023	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Vic EPA 1828.2 Table 3 (Solids)			
Metals IWRG 621 : Metals M12	Melbourne	Sep 11, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Sep 08, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			

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Company Name:	Scaada Group Services Pty Ltd	Order No.:		Received:	Sep 8, 2023 11:00 AM
Address:	West 6 Federal Mills Park, 33 Mackey Street North Geelong VIC 3215	Report #:	1024571	Due:	Sep 15, 2023
Project Name:	J246707	Phone:	0455 500 084	Priority:	5 Day
Project ID:	J246707	Fax:		Contact Name:	- (ALL REPORTS /

Eurofins Analytical Services Manager :

Sample Detail						Asbestos Absence /Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OCP/OPP/M8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals : Metals M15 (ex HexCf)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												X						
External Laboratory																		
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID													
1	BH01_0.6	Sep 06, 2023		Soil	M23-Se0019455			X	X			X						
2	BH01_1.4	Sep 06, 2023		Soil	M23-Se0019456			X	X				X				X	
3	BH01_2.7	Sep 06, 2023		Soil	M23-Se0019457				X			X						
4	BH02_0.6	Sep 06, 2023		Soil	M23-Se0019458				X									X
5	BH02_4.2	Sep 06, 2023		Soil	M23-Se0019459			X	X			X						
6	BH03_0.9	Sep 06, 2023		Soil	M23-Se0019460				X			X						
7	BH04_0.3	Sep 06, 2023		Soil	M23-Se0019461			X	X				X				X	
8	BH04_2.3	Sep 06, 2023		Soil	M23-Se0019462				X	X	X							
9	BH05_1.0	Sep 06, 2023		Soil	M23-Se0019463				X			X						
10	BH05_1.4	Sep 06, 2023		Soil	M23-Se0019464				X				X				X	
11	BH05_1.5	Sep 06, 2023		Soil	M23-Se0019465				X						X			
12	BH05_2.6	Sep 06, 2023		Soil	M23-Se0019466				X	X		X						

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Project ID:	J246707	Fax:		Contact Name:	- (ALL REPORTS /

Eurofins Analytical Services Manager :

Sample Detail				Asbestos Absence /Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OCP/OPPM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals: Metals M15 (ex HexCf)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X							
13	BH06_0.9	Sep 06, 2023	Soil			X		X				X			X	
14	BH06_1.6	Sep 06, 2023	Soil					X			X					
15	BH07_0.5	Sep 06, 2023	Soil			X		X				X			X	
16	BH08_0.4	Sep 06, 2023	Soil					X			X					
17	BH08_0.6	Sep 06, 2023	Soil			X		X				X				
18	BH09_0.4	Sep 06, 2023	Soil			X		X				X			X	
19	BH09_4.9	Sep 06, 2023	Soil			X		X			X					
20	BH09_5.4	Sep 06, 2023	Soil			X		X				X				
21	BH10_0.4	Sep 08, 2023	Soil			X		X			X					
22	BH10_1.0	Sep 08, 2023	Soil					X				X			X	
23	BH10_1.5	Sep 08, 2023	Soil			X		X				X				
24	BH10_3.8	Sep 08, 2023	Soil			X		X				X				
25	BH10_4.9	Sep 08, 2023	Soil					X	X							
26	BH11_0.4	Sep 08, 2023	Soil			X		X				X				
27	BH12_0.6	Sep 08, 2023	Soil					X	X							

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Sample Detail						Asbestos Absence / Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/PM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals: Metals M15 (ex HexCf)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											X							
28	BH13_0.3	Sep 08, 2023		Soil	M23-Se0019482					X						X		
29	BH14_0.15	Sep 08, 2023		Soil	M23-Se0019483					X								X
30	BH15_0.1	Sep 08, 2023		Soil	M23-Se0019484		X			X			X					
31	D1_6923	Sep 06, 2023		Soil	M23-Se0019485					X			X					
32	D2_6923	Sep 06, 2023		Soil	M23-Se0019486					X			X					
33	RB_8923	Sep 08, 2023		Water	M23-Se0019487									X				
34	TB_6923	Sep 06, 2023		Water	M23-Se0019488				X									
35	BH16_DEBRI S0.2	Sep 08, 2023		Building Materials	M23-Se0019489	X												
36	BH05_DEBRI S2.0	Sep 06, 2023		Building Materials	M23-Se0019490	X												
37	BH09_DEBRI S0.5	Sep 06, 2023		Building Materials	M23-Se0019491	X												
38	BH14_DEBRI S0.1	Sep 08, 2023		Building Materials	M23-Se0019492	X												
39	BH06_DEBRI	Sep 06, 2023		Building	M23-Se0019493	X												

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Sample Detail				Asbestos Absence / Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/PM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals: Metals M15 (ex HexC)	Suite R20A: NEPM Basic Suite plus VIC EPA WRC 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794										X						
	S4.4		Materials													
40	BH06_DEBRI S4.5	Sep 06, 2023	Building Materials	M23-Se0019494	X											
41	BH02_1.2	Sep 06, 2023	Soil	M23-Se0019495		X										
42	BH02_3.7	Sep 06, 2023	Soil	M23-Se0019496		X										
43	BH07_0.8	Sep 06, 2023	Soil	M23-Se0019497		X										
44	BH07_4.8	Sep 06, 2023	Soil	M23-Se0019498		X										
45	BH07_5.3	Sep 06, 2023	Soil	M23-Se0019499		X										
46	BH08_1.0	Sep 06, 2023	Soil	M23-Se0019500		X										
47	BH08_1.6	Sep 06, 2023	Soil	M23-Se0019501		X										
48	BH08_2.4	Sep 06, 2023	Soil	M23-Se0019502		X										
49	BH09_2.0	Sep 06, 2023	Soil	M23-Se0019503		X										
50	BH09_2.6	Sep 06, 2023	Soil	M23-Se0019504		X										
51	BH09_3.3	Sep 06, 2023	Soil	M23-Se0019505		X										
52	BH09_3.7	Sep 06, 2023	Soil	M23-Se0019506		X										

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Sample Detail						Asbestos Absence / Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/PM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals : Metals M15 (ex HexC)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												X						
53	BH09_3.9	Sep 06, 2023		Soil	M23-Se0019507		X											
54	BH09_5.5	Sep 06, 2023		Soil	M23-Se0019508		X											
55	BH10_2.2	Sep 08, 2023		Soil	M23-Se0019509		X											
56	BH10_2.5	Sep 08, 2023		Soil	M23-Se0019510		X											
57	BH16_0.15	Sep 08, 2023		Soil	M23-Se0019511		X											
58	BH06_DEBRI S4.0-4.8	Sep 06, 2023		Building Materials	M23-Se0019512		X											
59	BH09_DEBRI S0-1.0	Sep 06, 2023		Building Materials	M23-Se0019513		X											
60	BH10_DEBRI S0-1.0	Sep 06, 2023		Building Materials	M23-Se0019514		X											
61	BH10_DEBRI S1.0-1.5	Sep 06, 2023		Building Materials	M23-Se0019515		X											
62	BH13_DEBRI S0.2	Sep 08, 2023		Building Materials	M23-Se0019516		X											
63	BH15_DEBRI S<0.1	Sep 08, 2023		Building Materials	M23-Se0019517		X											

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Sample Detail				Asbestos Absence /Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/PM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals : Metals M15 (ex HexC)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X							
64	BH06_3.8	Sep 06, 2023	Soil		X											
65	BH06_4.7	Sep 06, 2023	Soil		X											
Test Counts				6	25	15	1	32	4	1	10	15	1	2	7	2

Internal Quality Control Review and Glossary

General

- 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.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 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
CFU: Colony forming unit		

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, PFPa, 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. SVOCs recoveries 20 – 150%

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

- 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.
- 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.
- 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.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 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	
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							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Bifenthrin	mg/kg	< 0.05			0.05	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	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Fluoride	mg/kg	< 100			100	Pass	
Conductivity (1:5 aqueous extract at 25 °C as rec.)	uS/cm	< 10			10	Pass	
Total Organic Carbon	%	0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Barium	mg/kg	< 10			10	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Iron	mg/kg	< 20			20	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Selenium	mg/kg	< 2			2	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 2			2	Pass	
Tin	mg/kg	< 10			10	Pass	
Tin	mg/kg	< 10			10	Pass	
Vanadium	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Volatile Organics							
1,1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
Benzene	mg/kg	< 0.1			0.1	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
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	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	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	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chlorinated Hydrocarbons							
1.2.4-Trichlorobenzene	mg/kg	< 0.05			0.05	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Triazines							
Atrazine	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Acid Herbicides							
2.4-D	mg/kg	< 0.5			0.5	Pass	
2.4-DB	mg/kg	< 0.5			0.5	Pass	
2.4.5-T	mg/kg	< 0.5			0.5	Pass	
2.4.5-TP	mg/kg	< 0.5			0.5	Pass	
Actril (loxynil)	mg/kg	< 0.5			0.5	Pass	
Dicamba	mg/kg	< 0.5			0.5	Pass	
Dichlorprop	mg/kg	< 0.5			0.5	Pass	
Dinitro-o-cresol	mg/kg	< 0.5			0.5	Pass	
Dinoseb	mg/kg	< 0.5			0.5	Pass	
MCPA	mg/kg	< 0.5			0.5	Pass	
MCPB	mg/kg	< 0.5			0.5	Pass	
Mecoprop	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
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	
Method Blank							
NEPM 2013 Acid Herbicides							
Picloram	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
NEPM 2013 Organochlorine Pesticides							
Mirex	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity*	meq/100g	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	99			70-130	Pass	
TRH C10-C14	%	74			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	72			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	82			70-130	Pass	
Toluene	%	82			70-130	Pass	
Ethylbenzene	%	85			70-130	Pass	
m&p-Xylenes	%	77			70-130	Pass	
Xylenes - Total*	%	78			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	108			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	84			70-130	Pass	
Acenaphthylene	%	89			70-130	Pass	
Anthracene	%	89			70-130	Pass	
Benz(a)anthracene	%	79			70-130	Pass	
Benzo(a)pyrene	%	83			70-130	Pass	
Benzo(b&j)fluoranthene	%	74			70-130	Pass	
Benzo(g,h,i)perylene	%	82			70-130	Pass	
Benzo(k)fluoranthene	%	87			70-130	Pass	
Chrysene	%	80			70-130	Pass	
Dibenz(a,h)anthracene	%	85			70-130	Pass	
Fluoranthene	%	89			70-130	Pass	
Fluorene	%	84			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	90			70-130	Pass	
Naphthalene	%	86			70-130	Pass	
Phenanthrene	%	82			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	110			70-130	Pass	
4,4'-DDD	%	114			70-130	Pass	
4,4'-DDE	%	103			70-130	Pass	
4,4'-DDT	%	76			70-130	Pass	
a-HCH	%	97			70-130	Pass	
Aldrin	%	103			70-130	Pass	
b-HCH	%	118			70-130	Pass	
d-HCH	%	118			70-130	Pass	
Dieldrin	%	110			70-130	Pass	
Endosulfan I	%	98			70-130	Pass	
Endosulfan II	%	89			70-130	Pass	

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	%	91		70-130	Pass	
Endrin	%	83		70-130	Pass	
Endrin aldehyde	%	81		70-130	Pass	
Endrin ketone	%	115		70-130	Pass	
g-HCH (Lindane)	%	101		70-130	Pass	
Heptachlor	%	101		70-130	Pass	
Heptachlor epoxide	%	96		70-130	Pass	
Hexachlorobenzene	%	116		70-130	Pass	
Methoxychlor	%	71		70-130	Pass	
Bifenthrin	%	123		70-130	Pass	
LCS - % Recovery						
Organophosphorus Pesticides						
Diazinon	%	76		70-130	Pass	
Dimethoate	%	72		70-130	Pass	
Ethion	%	100		70-130	Pass	
Fenitrothion	%	100		70-130	Pass	
Methyl parathion	%	87		70-130	Pass	
Mevinphos	%	91		70-130	Pass	
LCS - % Recovery						
Chromium (hexavalent)	%	78		70-130	Pass	
Cyanide (total)	%	100		70-130	Pass	
Fluoride	%	87		70-130	Pass	
% Clay	%	90		70-130	Pass	
Conductivity (1:5 aqueous extract at 25 °C as rec.)	%	111		70-130	Pass	
Total Organic Carbon	%	114		70-130	Pass	
LCS - % Recovery						
Heavy Metals						
Arsenic	%	112		80-120	Pass	
Arsenic	%	113		80-120	Pass	
Arsenic	%	113		80-120	Pass	
Barium	%	115		80-120	Pass	
Barium	%	114		80-120	Pass	
Beryllium	%	118		80-120	Pass	
Boron	%	91		80-120	Pass	
Cadmium	%	109		80-120	Pass	
Cadmium	%	110		80-120	Pass	
Cadmium	%	110		80-120	Pass	
Chromium	%	120		80-120	Pass	
Chromium	%	119		80-120	Pass	
Cobalt	%	117		80-120	Pass	
Cobalt	%	119		80-120	Pass	
Cobalt	%	115		80-120	Pass	
Copper	%	119		80-120	Pass	
Copper	%	119		80-120	Pass	
Copper	%	116		80-120	Pass	
Iron	%	118		80-120	Pass	
Lead	%	118		80-120	Pass	
Lead	%	118		80-120	Pass	
Lead	%	117		80-120	Pass	
Manganese	%	116		80-120	Pass	
Manganese	%	117		80-120	Pass	
Manganese	%	112		80-120	Pass	
Mercury	%	108		80-120	Pass	
Mercury	%	107		80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	%	111			80-120	Pass	
Molybdenum	%	116			80-120	Pass	
Molybdenum	%	115			80-120	Pass	
Nickel	%	114			80-120	Pass	
Nickel	%	114			80-120	Pass	
Nickel	%	115			80-120	Pass	
Selenium	%	111			80-120	Pass	
Selenium	%	111			80-120	Pass	
Selenium	%	117			80-120	Pass	
Silver	%	109			80-120	Pass	
Silver	%	110			80-120	Pass	
Tin	%	118			80-120	Pass	
Tin	%	120			80-120	Pass	
Vanadium	%	120			80-120	Pass	
Zinc	%	113			80-120	Pass	
Zinc	%	116			80-120	Pass	
Zinc	%	114			80-120	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	113			70-130	Pass	
1.1.1-Trichloroethane	%	78			70-130	Pass	
1.2-Dichlorobenzene	%	78			70-130	Pass	
1.2-Dichloroethane	%	93			70-130	Pass	
Benzene	%	87			70-130	Pass	
Ethylbenzene	%	73			70-130	Pass	
m&p-Xylenes	%	75			70-130	Pass	
Toluene	%	80			70-130	Pass	
Trichloroethene	%	123			70-130	Pass	
Xylenes - Total*	%	76			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	97			70-130	Pass	
LCS - % Recovery							
Acid Herbicides							
2.4-D	%	83			70-130	Pass	
2.4-DB	%	84			70-130	Pass	
2.4.5-T	%	77			70-130	Pass	
2.4.5-TP	%	80			70-130	Pass	
Actril (loxynil)	%	89			70-130	Pass	
Dicamba	%	104			70-130	Pass	
Dichlorprop	%	72			70-130	Pass	
Dinitro-o-cresol	%	78			70-130	Pass	
Dinoseb	%	82			70-130	Pass	
MCPA	%	80			70-130	Pass	
MCPB	%	94			70-130	Pass	
Mecoprop	%	82			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	79			25-140	Pass	
2.4-Dichlorophenol	%	88			25-140	Pass	
2.4.5-Trichlorophenol	%	52			25-140	Pass	
2.4.6-Trichlorophenol	%	63			25-140	Pass	
2.6-Dichlorophenol	%	87			25-140	Pass	
4-Chloro-3-methylphenol	%	79			25-140	Pass	

Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol			%	51		25-140	Pass	
Tetrachlorophenols - Total			%	53		25-140	Pass	
LCS - % Recovery								
Phenols (non-Halogenated)								
2-Cyclohexyl-4,6-dinitrophenol			%	90		25-140	Pass	
2-Methyl-4,6-dinitrophenol			%	34		25-140	Pass	
2-Nitrophenol			%	86		25-140	Pass	
2,4-Dimethylphenol			%	79		25-140	Pass	
2,4-Dinitrophenol			%	71		25-140	Pass	
2-Methylphenol (o-Cresol)			%	85		25-140	Pass	
3&4-Methylphenol (m&p-Cresol)			%	75		25-140	Pass	
4-Nitrophenol			%	33		25-140	Pass	
Dinoseb			%	50		25-140	Pass	
Phenol			%	83		25-140	Pass	
LCS - % Recovery								
NEPM 2013 Acid Herbicides								
Picloram			%	84		70-130	Pass	
LCS - % Recovery								
NEPM 2013 Organochlorine Pesticides								
Mirex			%	90		70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C6-C9	M23-Se0019455	CP	%	129		70-130	Pass	
TRH C10-C14	M23-Se0023814	NCP	%	72		70-130	Pass	
TRH C6-C10	M23-Se0019455	CP	%	130		70-130	Pass	
TRH >C10-C16	M23-Se0023814	NCP	%	72		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	M23-Se0019455	CP	%	95		70-130	Pass	
Toluene	M23-Se0019455	CP	%	97		70-130	Pass	
Ethylbenzene	M23-Se0019455	CP	%	98		70-130	Pass	
m&p-Xylenes	M23-Se0019455	CP	%	99		70-130	Pass	
o-Xylene	M23-Se0019455	CP	%	102		70-130	Pass	
Xylenes - Total*	M23-Se0019455	CP	%	100		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	M23-Se0019455	CP	%	95		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Zinc	M23-Se0019813	NCP	%	124		75-125	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M23-Se0019456	CP	%	116		75-125	Pass	
Barium	M23-Se0019813	NCP	%	128		75-125	Fail	Q08
Beryllium	M23-Se0019456	CP	%	121		75-125	Pass	
Cadmium	M23-Se0019456	CP	%	108		75-125	Pass	
Cobalt	M23-Se0019456	CP	%	112		75-125	Pass	
Copper	M23-Se0019456	CP	%	74		75-125	Fail	Q08
Molybdenum	M23-Se0019456	CP	%	117		75-125	Pass	
Nickel	M23-Se0019456	CP	%	121		75-125	Pass	
Selenium	M23-Se0019456	CP	%	111		75-125	Pass	
Silver	M23-Se0019456	CP	%	106		75-125	Pass	
Tin	M23-Se0019456	CP	%	124		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Vanadium	M23-Se0019456	CP	%	102		75-125	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Chlordanes - Total	M23-Se0019457	CP	%	108		70-130	Pass	
4.4'-DDD	M23-Se0019457	CP	%	99		70-130	Pass	
4.4'-DDE	M23-Se0019457	CP	%	109		70-130	Pass	
4.4'-DDT	M23-Se0019457	CP	%	100		70-130	Pass	
a-HCH	M23-Se0019457	CP	%	106		70-130	Pass	
Aldrin	M23-Se0019457	CP	%	91		70-130	Pass	
b-HCH	M23-Se0019457	CP	%	120		70-130	Pass	
d-HCH	M23-Se0019457	CP	%	90		70-130	Pass	
Dieldrin	M23-Se0019457	CP	%	117		70-130	Pass	
Endosulfan I	M23-Se0019457	CP	%	94		70-130	Pass	
Endosulfan II	M23-Se0019457	CP	%	109		70-130	Pass	
Endosulfan sulphate	M23-Se0019457	CP	%	95		70-130	Pass	
Endrin	M23-Se0019457	CP	%	81		70-130	Pass	
Endrin aldehyde	M23-Se0019457	CP	%	110		70-130	Pass	
Endrin ketone	M23-Se0019457	CP	%	89		70-130	Pass	
g-HCH (Lindane)	M23-Se0019457	CP	%	91		70-130	Pass	
Heptachlor	M23-Se0019457	CP	%	109		70-130	Pass	
Heptachlor epoxide	M23-Se0019457	CP	%	89		70-130	Pass	
Hexachlorobenzene	M23-Se0019457	CP	%	99		70-130	Pass	
Methoxychlor	M23-Se0019457	CP	%	109		70-130	Pass	
Bifenthrin	M23-Se0019457	CP	%	107		70-130	Pass	
Spike - % Recovery								
Organophosphorus Pesticides				Result 1				
Diazinon	M23-Se0019185	NCP	%	96		70-130	Pass	
Dimethoate	M23-Se0019185	NCP	%	83		70-130	Pass	
Ethion	M23-Se0019185	NCP	%	95		70-130	Pass	
Fenitrothion	M23-Se0019185	NCP	%	97		70-130	Pass	
Methyl parathion	M23-Se0019185	NCP	%	85		70-130	Pass	
Mevinphos	M23-Se0019185	NCP	%	95		70-130	Pass	
Spike - % Recovery								
NEPM 2013 Organochlorine Pesticides				Result 1				
Mirex	M23-Se0019457	CP	%	105		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C6-C9	M23-Se0019458	CP	%	93		70-130	Pass	
TRH C6-C10	M23-Se0019458	CP	%	91		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	M23-Se0019458	CP	%	74		70-130	Pass	
Toluene	M23-Se0019458	CP	%	78		70-130	Pass	
Ethylbenzene	M23-Se0019458	CP	%	76		70-130	Pass	
m&p-Xylenes	M23-Se0019458	CP	%	72		70-130	Pass	
o-Xylene	M23-Se0019458	CP	%	83		70-130	Pass	
Xylenes - Total*	M23-Se0019458	CP	%	75		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	M23-Se0019458	CP	%	94		70-130	Pass	
Spike - % Recovery								
Organochlorine Pesticides				Result 1				
Bifenthrin	M23-Se0024610	NCP	%	117		70-130	Pass	
Spike - % Recovery								

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
				Result 1				
Chromium (hexavalent)	B23-Se0021060	NCP	%	49		70-130	Fail	Q08
Cyanide (total)	M23-Se0019458	CP	%	83		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1.1-Dichloroethene	M23-Se0019458	CP	%	88		70-130	Pass	
1.1.1-Trichloroethane	M23-Se0019458	CP	%	73		70-130	Pass	
1.2-Dichlorobenzene	M23-Se0019458	CP	%	73		70-130	Pass	
1.2-Dichloroethane	M23-Se0019458	CP	%	99		70-130	Pass	
Trichloroethene	M23-Se0019458	CP	%	84		70-130	Pass	
Spike - % Recovery								
Polychlorinated Biphenyls				Result 1				
Aroclor-1016	M23-Se0019427	NCP	%	108		70-130	Pass	
Aroclor-1260	M23-Se0019427	NCP	%	107		70-130	Pass	
Spike - % Recovery								
Acid Herbicides				Result 1				
Dichlorprop	M23-Se0016228	NCP	%	73		70-130	Pass	
Spike - % Recovery								
Phenols (Halogenated)				Result 1				
2-Chlorophenol	M23-Se0009193	NCP	%	106		30-130	Pass	
2.4-Dichlorophenol	M23-Se0009193	NCP	%	84		30-130	Pass	
2.4.5-Trichlorophenol	M23-Se0009193	NCP	%	69		30-130	Pass	
2.4.6-Trichlorophenol	M23-Se0009193	NCP	%	102		30-130	Pass	
2.6-Dichlorophenol	M23-Se0009193	NCP	%	80		30-130	Pass	
4-Chloro-3-methylphenol	M23-Se0009193	NCP	%	115		30-130	Pass	
Pentachlorophenol	M23-Se0009193	NCP	%	59		30-130	Pass	
Tetrachlorophenols - Total	M23-Se0009193	NCP	%	69		30-130	Pass	
Spike - % Recovery								
Phenols (non-Halogenated)				Result 1				
2-Cyclohexyl-4.6-dinitrophenol	M23-Se0009193	NCP	%	49		30-130	Pass	
2-Methyl-4.6-dinitrophenol	M23-Se0009193	NCP	%	71		30-130	Pass	
2-Nitrophenol	M23-Se0009193	NCP	%	112		30-130	Pass	
2.4-Dimethylphenol	M23-Se0009193	NCP	%	104		30-130	Pass	
2.4-Dinitrophenol	M23-Se0009193	NCP	%	57		30-130	Pass	
2-Methylphenol (o-Cresol)	M23-Se0009193	NCP	%	91		30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M23-Se0009193	NCP	%	69		30-130	Pass	
4-Nitrophenol	M23-Se0009193	NCP	%	37		30-130	Pass	
Dinoseb	M23-Se0009193	NCP	%	113		30-130	Pass	
Phenol	M23-Se0009193	NCP	%	127		30-130	Pass	
Spike - % Recovery								
NEPM 2013 Acid Herbicides				Result 1				
Picloram	M23-Se0022066	NCP	%	86		70-130	Pass	
Spike - % Recovery								
NEPM 2013 Organochlorine Pesticides				Result 1				
Mirex	M23-Se0026438	NCP	%	107		70-130	Pass	
Spike - % Recovery								
				Result 1				
Fluoride	M23-Se0019465	CP	%	69		70-130	Fail	Q08
Spike - % Recovery								
Total Recoverable Hydrocarbons				Result 1				
TRH C6-C9	M23-Se0019467	CP	%	93		70-130	Pass	
TRH C6-C10	M23-Se0019467	CP	%	91		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Benzene	M23-Se0019467	CP	%	80		70-130	Pass	
Toluene	M23-Se0019467	CP	%	90		70-130	Pass	
Ethylbenzene	M23-Se0019467	CP	%	90		70-130	Pass	
m&p-Xylenes	M23-Se0019467	CP	%	85		70-130	Pass	
o-Xylene	M23-Se0019467	CP	%	90		70-130	Pass	
Xylenes - Total*	M23-Se0019467	CP	%	87		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	M23-Se0019467	CP	%	80		70-130	Pass	
Spike - % Recovery								
Volatile Organics				Result 1				
1.1-Dichloroethene	M23-Se0019467	CP	%	101		70-130	Pass	
1.1.1-Trichloroethane	M23-Se0019467	CP	%	86		70-130	Pass	
1.2-Dichlorobenzene	M23-Se0019467	CP	%	84		70-130	Pass	
1.2-Dichloroethane	M23-Se0019467	CP	%	97		70-130	Pass	
Trichloroethene	M23-Se0019467	CP	%	98		70-130	Pass	
Spike - % Recovery								
Heavy Metals				Result 1				
Arsenic	M23-Se0019469	CP	%	102		75-125	Pass	
Beryllium	M23-Se0019469	CP	%	106		75-125	Pass	
Boron	M23-Se0019469	CP	%	124		75-125	Pass	
Cadmium	M23-Se0019469	CP	%	98		75-125	Pass	
Cobalt	M23-Se0019469	CP	%	96		75-125	Pass	
Copper	M23-Se0019469	CP	%	81		75-125	Pass	
Lead	M23-Se0019469	CP	%	109		75-125	Pass	
Mercury	M23-Se0019469	CP	%	91		75-125	Pass	
Molybdenum	M23-Se0019469	CP	%	101		75-125	Pass	
Selenium	M23-Se0019469	CP	%	103		75-125	Pass	
Silver	M23-Se0019469	CP	%	99		75-125	Pass	
Tin	M23-Se0019469	CP	%	118		75-125	Pass	
Vanadium	M23-Se0019469	CP	%	105		75-125	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M23-Se0019477	CP	%	89		70-130	Pass	
Acenaphthylene	M23-Se0019477	CP	%	92		70-130	Pass	
Anthracene	M23-Se0019477	CP	%	83		70-130	Pass	
Benz(a)anthracene	M23-Se0019477	CP	%	79		70-130	Pass	
Benzo(a)pyrene	M23-Se0019477	CP	%	88		70-130	Pass	
Benzo(b&j)fluoranthene	M23-Se0019477	CP	%	99		70-130	Pass	
Benzo(g,h,i)perylene	M23-Se0019477	CP	%	99		70-130	Pass	
Benzo(k)fluoranthene	M23-Se0019477	CP	%	95		70-130	Pass	
Chrysene	M23-Se0019477	CP	%	99		70-130	Pass	
Dibenz(a,h)anthracene	M23-Se0019477	CP	%	71		70-130	Pass	
Fluoranthene	M23-Se0019477	CP	%	105		70-130	Pass	
Fluorene	M23-Se0019477	CP	%	85		70-130	Pass	
Indeno(1,2,3-cd)pyrene	M23-Se0019477	CP	%	82		70-130	Pass	
Naphthalene	M23-Se0019477	CP	%	95		70-130	Pass	
Phenanthrene	M23-Se0019477	CP	%	97		70-130	Pass	
Pyrene	M23-Se0019477	CP	%	113		70-130	Pass	
Spike - % Recovery								
Acid Herbicides				Result 1				
2,4-D	M23-Se0019220	NCP	%	124		70-130	Pass	
Spike - % Recovery								
Acid Herbicides				Result 1				

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Actril (loxynil)	M23-Se0019481	CP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M23-Se0019485	CP	%	127			75-125	Fail	Q08
Beryllium	M23-Se0019485	CP	%	107			75-125	Pass	
Boron	M23-Se0019485	CP	%	104			75-125	Pass	
Cadmium	M23-Se0019485	CP	%	103			75-125	Pass	
Chromium	M23-Se0019485	CP	%	124			75-125	Pass	
Cobalt	M23-Se0019485	CP	%	112			75-125	Pass	
Manganese	M23-Se0019485	CP	%	81			75-125	Pass	
Mercury	M23-Se0019485	CP	%	86			75-125	Pass	
Molybdenum	M23-Se0019485	CP	%	124			75-125	Pass	
Selenium	M23-Se0019485	CP	%	106			75-125	Pass	
Silver	M23-Se0019485	CP	%	107			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	M23-Se0020125	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C6-C10	M23-Se0020125	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M23-Se0020125	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M23-Se0020125	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M23-Se0020125	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M23-Se0020125	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M23-Se0020125	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M23-Se0020125	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M23-Se0020125	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4,4'-DDD	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
a-HCH	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bifenthrin	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	M23-Se0019455	CP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfthion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	M23-Se0019455	CP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	M23-Se0019455	CP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate								
Chlorinated Hydrocarbons				Result 1	Result 2	RPD		
1.2.4-Trichlorobenzene	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M23-Se0019455	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Triazines				Result 1	Result 2	RPD		
Atrazine	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dichlorophenol	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-Trichlorophenol	M23-Se0019455	CP	mg/kg	< 1	< 1	<1	30%	Pass
2.4.6-Trichlorophenol	M23-Se0019455	CP	mg/kg	< 1	< 1	<1	30%	Pass
2.6-Dichlorophenol	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M23-Se0019455	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M23-Se0019455	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M23-Se0019455	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4.6-dinitrophenol	M23-Se0019455	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4.6-dinitrophenol	M23-Se0019455	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M23-Se0019455	CP	mg/kg	< 1	< 1	<1	30%	Pass
2.4-Dimethylphenol	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-Dinitrophenol	M23-Se0019455	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M23-Se0019455	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M23-Se0019455	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M23-Se0019455	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M23-Se0019455	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M23-Se0019455	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD		
Mirex	M23-Se0019455	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019456	CP	mg/kg	32	32	1.1	30%	Pass
Barium	M23-Se0019456	CP	mg/kg	160	160	<1	30%	Pass
Beryllium	M23-Se0019456	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M23-Se0019456	CP	mg/kg	< 20	< 20	<1	30%	Pass
Cadmium	M23-Se0019456	CP	mg/kg	0.5	0.5	4.0	30%	Pass
Chromium	M23-Se0019456	CP	mg/kg	95	95	<1	30%	Pass
Cobalt	M23-Se0019456	CP	mg/kg	14	14	1.1	30%	Pass
Copper	M23-Se0019456	CP	mg/kg	83	83	<1	30%	Pass
Iron	M23-Se0019456	CP	mg/kg	30000	31000	<1	30%	Pass
Lead	M23-Se0019456	CP	mg/kg	89	89	<1	30%	Pass
Manganese	M23-Se0019456	CP	mg/kg	460	460	<1	30%	Pass
Mercury	M23-Se0019456	CP	mg/kg	4.0	3.8	4.7	30%	Pass
Molybdenum	M23-Se0019456	CP	mg/kg	< 5	< 5	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Nickel	M23-Se0019456	CP	mg/kg	30	30	<1	30%	Pass
Selenium	M23-Se0019456	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M23-Se0019456	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M23-Se0019456	CP	mg/kg	< 10	< 10	<1	30%	Pass
Vanadium	M23-Se0019456	CP	mg/kg	68	69	<1	30%	Pass
Zinc	M23-Se0019456	CP	mg/kg	450	450	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M23-Se0019458	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M23-Se0019458	CP	mg/kg	57	< 50	15	30%	Pass
TRH C29-C36	M23-Se0019458	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M23-Se0019458	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M23-Se0019458	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M23-Se0019458	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
pH (1:5 Aqueous extract at 25 °C as rec.)	M23-Se0019458	CP	pH Units	7.7	7.7	pass	30%	Pass
Cyanide (total)	M23-Se0017163	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Fluoride	M23-Se0033098	NCP	mg/kg	< 100	< 100	<1	30%	Pass
Conductivity (1:5 aqueous extract at 25 °C as rec.)	M23-Se0019458	CP	uS/cm	320	340	8.6	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Hexachlorobutadiene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.4-Trimethylbenzene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3.5-Trimethylbenzene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Butanone (MEK)	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2-Propanone (Acetone)	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chlorotoluene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Allyl chloride	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromobenzene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromochloromethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon disulfide	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
Chloroform	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorodifluoromethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Isopropyl benzene (Cumene)	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Styrene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.2-Dichloroethene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	M23-Se0019219	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Chlorinated Hydrocarbons				Result 1	Result 2	RPD		
1.2.4-Trichlorobenzene	M23-Se0011006	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019461	CP	mg/kg	170	170	<1	30%	Pass
Barium	M23-Se0019461	CP	mg/kg	110	110	<1	30%	Pass
Beryllium	M23-Se0019461	CP	mg/kg	3.2	3.3	3.3	30%	Pass
Boron	M23-Se0019461	CP	mg/kg	< 20	< 20	<1	30%	Pass
Cadmium	M23-Se0019461	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M23-Se0019461	CP	mg/kg	86	88	1.7	30%	Pass
Cobalt	M23-Se0019461	CP	mg/kg	26	27	2.4	30%	Pass
Copper	M23-Se0019461	CP	mg/kg	6.2	6.2	1.2	30%	Pass
Lead	M23-Se0019461	CP	mg/kg	11	11	1.5	30%	Pass
Manganese	M23-Se0019461	CP	mg/kg	160	160	1.2	30%	Pass
Mercury	M23-Se0019461	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M23-Se0019461	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M23-Se0019461	CP	mg/kg	52	52	<1	30%	Pass
Selenium	M23-Se0019461	CP	mg/kg	2.1	2.2	4.2	30%	Pass
Silver	M23-Se0019461	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M23-Se0019461	CP	mg/kg	< 10	< 10	<1	30%	Pass
Vanadium	M23-Se0019461	CP	mg/kg	400	400	1.0	30%	Pass
Zinc	M23-Se0019461	CP	mg/kg	37	36	1.6	30%	Pass
Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	M23-Se0019461	CP	%	10	10	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Conductivity (1:5 aqueous extract at 25 °C as rec.)	M23-Se0019230	NCP	uS/cm	110	120	12	30%	Pass
Total Organic Carbon	L23-Au0081559	NCP	%	2.1	2.4	14	30%	Pass
Duplicate								
Cation Exchange Capacity				Result 1	Result 2	RPD		
Cation Exchange Capacity*	B23-Se0017811	NCP	meq/100g	25	22	11	30%	Pass

Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M23-Se0019465	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M23-Se0019465	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M23-Se0019465	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M23-Se0019465	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M23-Se0019465	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M23-Se0019465	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bifenthrin	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Chlorpyrifos-methyl	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	M23-Se0019465	CP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfothion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	M23-Se0019465	CP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	M23-Se0019465	CP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1,2,4-Trichlorobenzene	M23-Se0026362	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	M23-Se0019465	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Duplicate								
Triazines				Result 1	Result 2	RPD		
Atrazine	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M23-Se0019465	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M23-Se0019465	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M23-Se0019465	CP	mg/kg	< 1	< 1	<1	30%	Pass

Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
Pentachlorophenol	M23-Se0019465	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M23-Se0019465	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M23-Se0019465	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M23-Se0019465	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M23-Se0019465	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dinitrophenol	M23-Se0019465	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M23-Se0019465	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M23-Se0019465	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M23-Se0019465	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M23-Se0019465	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M23-Se0019465	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD		
Mirex	M23-Se0019465	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019468	CP	mg/kg	2.5	2.5	<1	30%	Pass
Barium	M23-Se0019468	CP	mg/kg	260	260	<1	30%	Pass
Beryllium	M23-Se0019468	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M23-Se0019468	CP	mg/kg	30	30	<1	30%	Pass
Cadmium	M23-Se0019468	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M23-Se0019468	CP	mg/kg	63	61	2.8	30%	Pass
Cobalt	M23-Se0019468	CP	mg/kg	15	15	<1	30%	Pass
Copper	M23-Se0019468	CP	mg/kg	13	13	<1	30%	Pass
Iron	M23-Se0019468	CP	mg/kg	34000	34000	1.7	30%	Pass
Lead	M23-Se0019468	CP	mg/kg	13	13	3.0	30%	Pass
Manganese	M23-Se0019468	CP	mg/kg	200	200	<1	30%	Pass
Mercury	M23-Se0019468	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M23-Se0019468	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M23-Se0019468	CP	mg/kg	42	42	<1	30%	Pass
Selenium	M23-Se0019468	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M23-Se0019468	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M23-Se0019468	CP	mg/kg	< 10	< 10	<1	30%	Pass
Vanadium	M23-Se0019468	CP	mg/kg	59	59	1.5	30%	Pass
Zinc	M23-Se0019468	CP	mg/kg	44	43	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M23-Se0019469	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M23-Se0019469	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M23-Se0019469	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M23-Se0019469	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M23-Se0019469	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M23-Se0019469	CP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Benzo(g,h,i)perylene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M23-Se0019469	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Bifenthrin	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	M23-Se0019469	CP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfthion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Malathion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	M23-Se0019469	CP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Phorate	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019469	CP	mg/kg	7.4	7.0	5.7	30%	Pass
Barium	M23-Se0019469	CP	mg/kg	640	610	3.7	30%	Pass
Beryllium	M23-Se0019469	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M23-Se0019469	CP	mg/kg	< 20	< 20	<1	30%	Pass
Cadmium	M23-Se0019469	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M23-Se0019469	CP	mg/kg	190	180	2.1	30%	Pass
Cobalt	M23-Se0019469	CP	mg/kg	< 5	< 5	<1	30%	Pass
Copper	M23-Se0019469	CP	mg/kg	26	25	6.0	30%	Pass
Iron	M23-Se0019469	CP	mg/kg	45000	43000	4.1	30%	Pass
Lead	M23-Se0019469	CP	mg/kg	11	10	5.3	30%	Pass
Manganese	M23-Se0019469	CP	mg/kg	6500	6100	5.6	30%	Pass
Mercury	M23-Se0019469	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M23-Se0019469	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M23-Se0019469	CP	mg/kg	33	31	4.5	30%	Pass
Selenium	M23-Se0019469	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M23-Se0019469	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M23-Se0019469	CP	mg/kg	< 10	< 10	<1	30%	Pass
Vanadium	M23-Se0019469	CP	mg/kg	19	18	3.9	30%	Pass
Zinc	M23-Se0019469	CP	mg/kg	130	120	4.6	30%	Pass
Duplicate								
Triazines				Result 1	Result 2	RPD		
Atrazine	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Phenols (Halogenated)				Result 1	Result 2	RPD		
2-Chlorophenol	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4-Dichlorophenol	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2,4,5-Trichlorophenol	M23-Se0019469	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4,6-Trichlorophenol	M23-Se0019469	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,6-Dichlorophenol	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
4-Chloro-3-methylphenol	M23-Se0019469	CP	mg/kg	< 1	< 1	<1	30%	Pass
Pentachlorophenol	M23-Se0019469	CP	mg/kg	< 1	< 1	<1	30%	Pass
Tetrachlorophenols - Total	M23-Se0019469	CP	mg/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2-Cyclohexyl-4,6-dinitrophenol	M23-Se0019469	CP	mg/kg	< 20	< 20	<1	30%	Pass
2-Methyl-4,6-dinitrophenol	M23-Se0019469	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Nitrophenol	M23-Se0019469	CP	mg/kg	< 1	< 1	<1	30%	Pass
2,4-Dimethylphenol	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Phenols (non-Halogenated)				Result 1	Result 2	RPD		
2,4-Dinitrophenol	M23-Se0019469	CP	mg/kg	< 5	< 5	<1	30%	Pass
2-Methylphenol (o-Cresol)	M23-Se0019469	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
3&4-Methylphenol (m&p-Cresol)	M23-Se0019469	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
4-Nitrophenol	M23-Se0019469	CP	mg/kg	< 5	< 5	<1	30%	Pass
Dinoseb	M23-Se0019469	CP	mg/kg	< 20	< 20	<1	30%	Pass
Phenol	M23-Se0019469	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD		
Mirex	M23-Se0019469	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	M23-Se0019471	CP	%	9.4	7.9	18	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019474	CP	mg/kg	23	24	4.6	30%	Pass
Barium	M23-Se0019474	CP	mg/kg	140	150	6.0	30%	Pass
Beryllium	M23-Se0019474	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M23-Se0019474	CP	mg/kg	< 20	< 20	<1	30%	Pass
Cadmium	M23-Se0019474	CP	mg/kg	4.2	4.4	4.6	30%	Pass
Chromium	M23-Se0019474	CP	mg/kg	45	48	5.6	30%	Pass
Cobalt	M23-Se0019474	CP	mg/kg	15	16	4.6	30%	Pass
Copper	M23-Se0019474	CP	mg/kg	37	39	5.2	30%	Pass
Lead	M23-Se0019474	CP	mg/kg	99	110	6.6	30%	Pass
Manganese	M23-Se0019474	CP	mg/kg	410	430	4.8	30%	Pass
Mercury	M23-Se0019474	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M23-Se0019474	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M23-Se0019474	CP	mg/kg	45	48	5.4	30%	Pass
Selenium	M23-Se0019474	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M23-Se0019474	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M23-Se0019474	CP	mg/kg	88	93	5.4	30%	Pass
Vanadium	M23-Se0019474	CP	mg/kg	52	53	3.3	30%	Pass
Zinc	M23-Se0019474	CP	mg/kg	4500	4700	4.5	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M23-Se0019476	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M23-Se0019476	CP	mg/kg	220	200	8.1	30%	Pass
TRH C29-C36	M23-Se0019476	CP	mg/kg	200	180	9.8	30%	Pass
TRH >C10-C16	M23-Se0019476	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M23-Se0019476	CP	mg/kg	340	310	8.6	30%	Pass
TRH >C34-C40	M23-Se0019476	CP	mg/kg	180	160	14	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M23-Se0019476	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M23-Se0019476	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M23-Se0019476	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M23-Se0019476	CP	mg/kg	1.0	1.0	9.0	30%	Pass
Benzo(a)pyrene	M23-Se0019476	CP	mg/kg	1.0	1.2	15	30%	Pass
Benzo(b&j)fluoranthene	M23-Se0019476	CP	mg/kg	0.9	0.9	2.6	30%	Pass
Benzo(g,h,i)perylene	M23-Se0019476	CP	mg/kg	0.6	0.8	30	30%	Pass
Benzo(k)fluoranthene	M23-Se0019476	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M23-Se0019476	CP	mg/kg	0.9	1.0	12	30%	Pass
Dibenz(a,h)anthracene	M23-Se0019476	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M23-Se0019476	CP	mg/kg	1.6	1.7	7.8	30%	Pass
Fluorene	M23-Se0019476	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Indeno(1.2.3-cd)pyrene	M23-Se0019476	CP	mg/kg	< 0.5	0.6	25	30%	Pass
Naphthalene	M23-Se0019476	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M23-Se0019476	CP	mg/kg	0.8	0.9	12	30%	Pass
Pyrene	M23-Se0019476	CP	mg/kg	1.9	2.1	8.9	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019479	CP	mg/kg	38	35	10	30%	Pass
Beryllium	M23-Se0019479	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M23-Se0019479	CP	mg/kg	43	36	16	30%	Pass
Chromium	M23-Se0019479	CP	mg/kg	44	48	8.9	30%	Pass
Cobalt	M23-Se0019479	CP	mg/kg	18	15	21	30%	Pass
Copper	M23-Se0019479	CP	mg/kg	130	180	28	30%	Pass
Manganese	M23-Se0019479	CP	mg/kg	460	510	11	30%	Pass
Mercury	M23-Se0019479	CP	mg/kg	0.9	0.9	1.0	30%	Pass
Molybdenum	M23-Se0019479	CP	mg/kg	11	11	1.1	30%	Pass
Nickel	M23-Se0019479	CP	mg/kg	58	72	22	30%	Pass
Selenium	M23-Se0019479	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M23-Se0019479	CP	mg/kg	< 2	< 2	<1	30%	Pass
Vanadium	M23-Se0019479	CP	mg/kg	22	23	4.8	30%	Pass
Zinc	M23-Se0019479	CP	mg/kg	310	320	4.4	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M23-Se0019480	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Sample Properties				Result 1	Result 2	RPD		
% Moisture	M23-Se0019482	CP	%	6.7	5.7	16	30%	Pass
Duplicate								
Acid Herbicides				Result 1	Result 2	RPD		
2.4-D	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4-DB	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-T	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
2.4.5-TP	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Actril (loxynil)	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dicamba	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dichlorprop	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dinitro-o-cresol	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dinoseb	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
MCPA	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
MCPB	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Mecoprop	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
NEPM 2013 Acid Herbicides				Result 1	Result 2	RPD		
Picloram	M23-Se0019483	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019484	CP	mg/kg	7.0	8.9	24	30%	Pass
Barium	M23-Se0019484	CP	mg/kg	160	190	17	30%	Pass
Beryllium	M23-Se0019484	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M23-Se0019484	CP	mg/kg	14	16	12	30%	Pass
Cadmium	M23-Se0019484	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M23-Se0019484	CP	mg/kg	41	47	14	30%	Pass
Cobalt	M23-Se0019484	CP	mg/kg	12	13	12	30%	Pass
Copper	M23-Se0019484	CP	mg/kg	38	36	3.3	30%	Pass
Iron	M23-Se0019484	CP	mg/kg	23000	28000	19	30%	Pass
Manganese	M23-Se0019484	CP	mg/kg	250	270	7.3	30%	Pass
Mercury	M23-Se0019484	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	M23-Se0019484	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M23-Se0019484	CP	mg/kg	29	35	19	30%	Pass
Selenium	M23-Se0019484	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M23-Se0019484	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M23-Se0019484	CP	mg/kg	< 10	< 10	<1	30%	Pass
Vanadium	M23-Se0019484	CP	mg/kg	46	54	16	30%	Pass
Zinc	M23-Se0019484	CP	mg/kg	120	120	2.8	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	M23-Se0019485	CP	mg/kg	13	13	<1	30%	Pass
Barium	M23-Se0019485	CP	mg/kg	210	200	2.8	30%	Pass
Beryllium	M23-Se0019485	CP	mg/kg	< 2	< 2	<1	30%	Pass
Boron	M23-Se0019485	CP	mg/kg	25	24	3.5	30%	Pass
Cadmium	M23-Se0019485	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	M23-Se0019485	CP	mg/kg	51	50	1.7	30%	Pass
Cobalt	M23-Se0019485	CP	mg/kg	14	14	<1	30%	Pass
Copper	M23-Se0019485	CP	mg/kg	26	26	1.3	30%	Pass
Iron	M23-Se0019485	CP	mg/kg	32000	32000	<1	30%	Pass
Lead	M23-Se0019485	CP	mg/kg	150	150	<1	30%	Pass
Manganese	M23-Se0019485	CP	mg/kg	260	260	<1	30%	Pass
Mercury	M23-Se0019485	CP	mg/kg	1.0	1.0	1.1	30%	Pass
Molybdenum	M23-Se0019485	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	M23-Se0019485	CP	mg/kg	38	38	1.1	30%	Pass
Selenium	M23-Se0019485	CP	mg/kg	< 2	< 2	<1	30%	Pass
Silver	M23-Se0019485	CP	mg/kg	< 2	< 2	<1	30%	Pass
Tin	M23-Se0019485	CP	mg/kg	90	89	1.0	30%	Pass
Vanadium	M23-Se0019485	CP	mg/kg	58	58	<1	30%	Pass
Zinc	M23-Se0019485	CP	mg/kg	160	160	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD		
TRH C10-C14	M23-Se0019486	CP	mg/kg	< 20	< 20	<1	30%	Pass
TRH C15-C28	M23-Se0019486	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH C29-C36	M23-Se0019486	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C10-C16	M23-Se0019486	CP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	M23-Se0019486	CP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	M23-Se0019486	CP	mg/kg	< 100	< 100	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	M23-Se0019486	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Comments
Sample Integrity

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

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised by:

Analytical Services Manager
 Senior Analyst-Inorganic
 Senior Analyst-Volatile
 Senior Analyst-Organic
 Senior Analyst-Inorganic
 Senior Analyst-Organic
 Senior Analyst-Volatile
 Senior Analyst-Asbestos
 Senior Analyst-Inorganic
 Senior Analyst-Metal
 Senior Analyst-Sample Properties

Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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SCAADA Environmental Pty Ltd
 West 6 Federal Mills Park, 33 Mackey Street
 North Geelong
 VIC 3215



NATA Accredited
Accreditation Number 1261
Site Number 1254

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: - (ALL REPORTS / SRA's)

Report 1024571-W
Project name J246707
Project ID J246707
Received Date Sep 08, 2023

Client Sample ID			RB_8923	TB_6923
Sample Matrix			Water	Water
Eurofins Sample No.			M23- Se0019487	M23- Se0019488
Date Sampled			Sep 08, 2023	Sep 06, 2023
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	0.02	mg/L	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	-
TRH C15-C28	0.1	mg/L	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-
BTEX				
Benzene	0.001	mg/L	< 0.001	-
Toluene	0.001	mg/L	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	103	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene ^{N02}	0.01	mg/L	< 0.01	-

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Sep 11, 2023	7 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Sep 11, 2023	7 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Sep 11, 2023	7 Days
Total Recoverable Hydrocarbons - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Sep 11, 2023	7 Days
Eurofins Suite B1 BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Melbourne	Sep 11, 2023	14 Days

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Company Name:	Scaada Group Services Pty Ltd	Order No.:		Received:	Sep 8, 2023 11:00 AM
Address:	West 6 Federal Mills Park, 33 Mackey Street North Geelong VIC 3215	Report #:	1024571	Due:	Sep 15, 2023
Project Name:	J246707	Phone:		Priority:	5 Day
Project ID:	J246707	Fax:		Contact Name:	- (ALL REPORTS /

Eurofins Analytical Services Manager :

Sample Detail						Asbestos Absence /Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/PM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals : Metals M15 (ex HexC)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												X						
External Laboratory																		
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID													
1	BH01_0.6	Sep 06, 2023		Soil	M23-Se0019455		X	X				X						
2	BH01_1.4	Sep 06, 2023		Soil	M23-Se0019456		X	X					X				X	
3	BH01_2.7	Sep 06, 2023		Soil	M23-Se0019457			X				X						
4	BH02_0.6	Sep 06, 2023		Soil	M23-Se0019458			X										X
5	BH02_4.2	Sep 06, 2023		Soil	M23-Se0019459		X	X				X						
6	BH03_0.9	Sep 06, 2023		Soil	M23-Se0019460			X				X						
7	BH04_0.3	Sep 06, 2023		Soil	M23-Se0019461		X	X					X				X	
8	BH04_2.3	Sep 06, 2023		Soil	M23-Se0019462			X	X	X								
9	BH05_1.0	Sep 06, 2023		Soil	M23-Se0019463			X				X						
10	BH05_1.4	Sep 06, 2023		Soil	M23-Se0019464			X					X				X	
11	BH05_1.5	Sep 06, 2023		Soil	M23-Se0019465			X							X			
12	BH05_2.6	Sep 06, 2023		Soil	M23-Se0019466			X	X			X						

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Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X							
13	BH06_0.9	Sep 06, 2023	Soil			X		X				X			X	
14	BH06_1.6	Sep 06, 2023	Soil					X			X					
15	BH07_0.5	Sep 06, 2023	Soil			X		X				X			X	
16	BH08_0.4	Sep 06, 2023	Soil					X			X					
17	BH08_0.6	Sep 06, 2023	Soil			X		X				X				
18	BH09_0.4	Sep 06, 2023	Soil			X		X				X			X	
19	BH09_4.9	Sep 06, 2023	Soil			X		X			X					
20	BH09_5.4	Sep 06, 2023	Soil			X		X				X				
21	BH10_0.4	Sep 08, 2023	Soil			X		X			X					
22	BH10_1.0	Sep 08, 2023	Soil					X				X			X	
23	BH10_1.5	Sep 08, 2023	Soil			X		X				X				
24	BH10_3.8	Sep 08, 2023	Soil			X		X				X				
25	BH10_4.9	Sep 08, 2023	Soil					X	X							
26	BH11_0.4	Sep 08, 2023	Soil			X		X				X				
27	BH12_0.6	Sep 08, 2023	Soil					X	X							

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Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											X							
28	BH13_0.3	Sep 08, 2023		Soil	M23-Se0019482					X						X		
29	BH14_0.15	Sep 08, 2023		Soil	M23-Se0019483					X								X
30	BH15_0.1	Sep 08, 2023		Soil	M23-Se0019484		X			X			X					
31	D1_6923	Sep 06, 2023		Soil	M23-Se0019485					X			X					
32	D2_6923	Sep 06, 2023		Soil	M23-Se0019486					X			X					
33	RB_8923	Sep 08, 2023		Water	M23-Se0019487									X				
34	TB_6923	Sep 06, 2023		Water	M23-Se0019488			X										
35	BH16_DEBRI S0.2	Sep 08, 2023		Building Materials	M23-Se0019489	X												
36	BH05_DEBRI S2.0	Sep 06, 2023		Building Materials	M23-Se0019490	X												
37	BH09_DEBRI S0.5	Sep 06, 2023		Building Materials	M23-Se0019491	X												
38	BH14_DEBRI S0.1	Sep 08, 2023		Building Materials	M23-Se0019492	X												
39	BH06_DEBRI	Sep 06, 2023		Building	M23-Se0019493	X												

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Sample Detail				Asbestos Absence / Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/PM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals: Metals M15 (ex HexC)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X							
	S4.4		Materials													
40	BH06_DEBRI S4.5	Sep 06, 2023	Building Materials	M23-Se0019494	X											
41	BH02_1.2	Sep 06, 2023	Soil	M23-Se0019495		X										
42	BH02_3.7	Sep 06, 2023	Soil	M23-Se0019496		X										
43	BH07_0.8	Sep 06, 2023	Soil	M23-Se0019497		X										
44	BH07_4.8	Sep 06, 2023	Soil	M23-Se0019498		X										
45	BH07_5.3	Sep 06, 2023	Soil	M23-Se0019499		X										
46	BH08_1.0	Sep 06, 2023	Soil	M23-Se0019500		X										
47	BH08_1.6	Sep 06, 2023	Soil	M23-Se0019501		X										
48	BH08_2.4	Sep 06, 2023	Soil	M23-Se0019502		X										
49	BH09_2.0	Sep 06, 2023	Soil	M23-Se0019503		X										
50	BH09_2.6	Sep 06, 2023	Soil	M23-Se0019504		X										
51	BH09_3.3	Sep 06, 2023	Soil	M23-Se0019505		X										
52	BH09_3.7	Sep 06, 2023	Soil	M23-Se0019506		X										

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Sample Detail						Asbestos Absence / Presence	HOLD	pH (1:5: Aqueous extract at 25 °C as rec.)	TRH C6-C10	Moisture Set	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	NEPM Screen for Soil Classification	Eurofins Suite B10: BTEX/TRH/PAH/OC/OPP/PM8	Eurofins Suite B7	Eurofins Suite B1	Vic EPA 1828.2 Table 3 (Solids)	NEPM Metals : Metals M15 (ex HexC)	Suite R20A: NEPM Basic Suite plus VIC EPA IWRG 621 Suite
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												X						
53	BH09_3.9	Sep 06, 2023		Soil	M23-Se0019507		X											
54	BH09_5.5	Sep 06, 2023		Soil	M23-Se0019508		X											
55	BH10_2.2	Sep 08, 2023		Soil	M23-Se0019509		X											
56	BH10_2.5	Sep 08, 2023		Soil	M23-Se0019510		X											
57	BH16_0.15	Sep 08, 2023		Soil	M23-Se0019511		X											
58	BH06_DEBRI S4.0-4.8	Sep 06, 2023		Building Materials	M23-Se0019512		X											
59	BH09_DEBRI S0-1.0	Sep 06, 2023		Building Materials	M23-Se0019513		X											
60	BH10_DEBRI S0-1.0	Sep 06, 2023		Building Materials	M23-Se0019514		X											
61	BH10_DEBRI S1.0-1.5	Sep 06, 2023		Building Materials	M23-Se0019515		X											
62	BH13_DEBRI S0.2	Sep 08, 2023		Building Materials	M23-Se0019516		X											
63	BH15_DEBRI S<0.1	Sep 08, 2023		Building Materials	M23-Se0019517		X											

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Melbourne Laboratory - NATA # 1261 Site # 1254				X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794										X						
64	BH06_3.8	Sep 06, 2023	Soil		X											
65	BH06_4.7	Sep 06, 2023	Soil		X											
Test Counts				6	25	15	1	32	4	1	10	15	1	2	7	2

Internal Quality Control Review and Glossary

General

- 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.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- 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
CFU: Colony forming unit		

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, PFPa, 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. SVOCs recoveries 20 – 150%

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

- 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.
- 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.
- 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.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- 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/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	94			70-130	Pass	
TRH C10-C14	%	119			70-130	Pass	
TRH C6-C10	%	95			70-130	Pass	
TRH >C10-C16	%	109			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	97			70-130	Pass	
Toluene	%	98			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
m&p-Xylenes	%	96			70-130	Pass	
Xylenes - Total*	%	96			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	96			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	M23-Se0012128	NCP	%	91	70-130	Pass	
TRH C10-C14	M23-Se0023808	NCP	%	107	70-130	Pass	
TRH C6-C10	M23-Se0012128	NCP	%	90	70-130	Pass	
TRH >C10-C16	M23-Se0023808	NCP	%	102	70-130	Pass	
Spike - % Recovery							
BTEX							
Benzene	M23-Se0012128	NCP	%	74	70-130	Pass	
Toluene	M23-Se0012128	NCP	%	74	70-130	Pass	
Ethylbenzene	M23-Se0012128	NCP	%	72	70-130	Pass	
m&p-Xylenes	M23-Se0012128	NCP	%	72	70-130	Pass	
o-Xylene	M23-Se0012128	NCP	%	73	70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Xylenes - Total*	M23-Se0012128	NCP	%	72			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M23-Se0012128	NCP	%	71			70-130	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	M23-Se0020367	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M23-Se0023254	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M23-Se0023254	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M23-Se0023254	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C6-C10	M23-Se0020367	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M23-Se0023254	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M23-Se0023254	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M23-Se0023254	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M23-Se0020367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M23-Se0020367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M23-Se0020367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M23-Se0020367	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M23-Se0020367	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M23-Se0020367	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M23-Se0020367	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	

Comments
Sample Integrity

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

Qualifier Codes/Comments

Code	Description
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.

Authorised by:

Analytical Services Manager
 Senior Analyst-Volatile
 Senior Analyst-Organic

Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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CERTIFICATE OF ANALYSIS

Work Order : **EM2316280**
Client : **SCAADA ENVIRONMENTAL PTY LTD**
Contact :
Address : EAST 6B, 33 MACKEY ST
NORTH GEELONG 3216
Telephone : ----
Project : J246707
Order number : J246707
C-O-C number : ----
Sampler :
Site : ----
Quote number : EN/222
No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 6
Laboratory : Environmental Division Melbourne
Contact : Peter Ravlic
Address : 4 Westall Rd Springvale VIC Australia 3171
Telephone : +6138549 9645
Date Samples Received : 11-Sep-2023 11:45
Date Analysis Commenced : 12-Sep-2023
Issue Date : 14-Sep-2023 15:20



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
- Surrogate Control Limits

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

Signatories

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

Signatories	Position	Accreditation Category
	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
	2IC Organic Chemist	Melbourne Organics, Springvale, VIC



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.

- 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.
- 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.
- EG005-T : EM2316214 #2 Poor spike recovery for total metal due to sample matrix. Confirmed by re-digestion and re-analysis.
- EG035T: EM2316214#2 Poor matrix spike recovery for total mercury due to sample matrix. Confirmed by re-extraction and re-analysis.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	T1_6923	T2_6923	----	----	----
Sampling date / time				06-Sep-2023 00:00	06-Sep-2023 00:00	----	----	----	
Compound	CAS Number	LOR	Unit	EM2316280-001	EM2316280-002	-----	-----	-----	
				Result	Result	----	----	----	
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%	13.3	6.5	----	----	----	
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg	16	79	----	----	----	
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----	
Chromium	7440-47-3	2	mg/kg	38	36	----	----	----	
Copper	7440-50-8	5	mg/kg	34	<5	----	----	----	
Lead	7439-92-1	5	mg/kg	100	5	----	----	----	
Nickel	7440-02-0	2	mg/kg	30	24	----	----	----	
Zinc	7440-66-6	5	mg/kg	115	25	----	----	----	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	0.8	<0.1	----	----	----	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----	
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----	
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----	
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----	
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----	
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	----	
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	----	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----	
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----	
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----	
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----	
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----	
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----	
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	----	----	----	
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	----	----	----	
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	----	----	



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	T1_6923	T2_6923	----	----	----
Sampling date / time				06-Sep-2023 00:00	06-Sep-2023 00:00	----	----	----	
Compound	CAS Number	LOR	Unit	EM2316280-001	EM2316280-002	-----	-----	-----	
				Result	Result	----	----	----	
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----	
C15 - C28 Fraction	----	100	mg/kg	100	<100	----	----	----	
C29 - C36 Fraction	----	100	mg/kg	130	<100	----	----	----	
^ C10 - C36 Fraction (sum)	----	50	mg/kg	230	<50	----	----	----	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	----	----	
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	----	----	
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----	
>C16 - C34 Fraction	----	100	mg/kg	200	<100	----	----	----	
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----	
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	200	<50	----	----	----	
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	----	----	
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----	
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----	
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----	
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----	
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----	
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	----	----	----	
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	----	
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%	94.7	81.5	----	----	----	
2-Chlorophenol-D4	93951-73-6	0.5	%	84.7	76.4	----	----	----	
2,4,6-Tribromophenol	118-79-6	0.5	%	91.5	58.5	----	----	----	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%	87.2	94.4	----	----	----	
Anthracene-d10	1719-06-8	0.5	%	105	123	----	----	----	
4-Terphenyl-d14	1718-51-0	0.5	%	106	109	----	----	----	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%	121	89.6	----	----	----	
Toluene-D8	2037-26-5	0.2	%	103	71.6	----	----	----	



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	T1_6923	T2_6923	----	----	----
				Sampling date / time	06-Sep-2023 00:00	06-Sep-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EM2316280-001	EM2316280-002	-----	-----	-----
					Result	Result	----	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		119	95.4	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2,4,6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124



QUALITY CONTROL REPORT

Work Order	: EM2316280	Page	: 1 of 7
Client	: SCAADA ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	:	Contact	: Peter Ravlic
Address	: EAST 6B, 33 MACKEY ST NORTH GEELONG 3216	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +6138549 9645
Project	: J246707	Date Samples Received	: 11-Sep-2023
Order number	: J246707	Date Analysis Commenced	: 12-Sep-2023
C-O-C number	: ----	Issue Date	: 14-Sep-2023
Sampler	:		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 2		
No. of samples analysed	: 2		



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.

Signatories	Position	Accreditation Category
	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
	2IC Organic Chemist	Melbourne Organics, Springvale, VIC



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: 5291182)									
EM2316199-005	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	9	9	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	38	28	30.8	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	12	10	23.1	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	94	102	8.6	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	67	74	9.9	0% - 50%
EM2316217-046	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	11	10	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	8	8	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	10	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	18	18	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	52	50	3.8	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	70	69	1.9	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5292833)									
EM2316276-001	Anonymous	EA055: Moisture Content	----	0.1	%	7.0	7.0	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5291183)									
EM2316199-005	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM2316217-046	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5293423)									
EM2316348-046	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



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: 5293423) - continued									
EM2316348-046	Anonymous	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	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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
		EM2316276-001	Anonymous	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	205-99-2 205-82-3			0.5	mg/kg	<0.5	<0.5	0.0	No Limit
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		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5291177)									
EM2316276-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5293422)									
EM2316348-046	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
EM2316276-001	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



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 (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5291177)									
EM2316276-001	Anonymous	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: 5293422)									
EM2316348-046	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
EM2316276-001	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
EP080: BTEXN (QC Lot: 5291177)									
EM2316276-001	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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



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: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5291182)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	123 mg/kg	98.6	70.0	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1.23 mg/kg	58.4	50.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	98.4	70.0	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.9 mg/kg	89.7	70.0	130
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	88.1	70.0	130
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	101	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	75.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5291183)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	101	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5293423)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	104	85.7	123
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	91.1	81.0	123
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	102	83.6	120
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	95.6	81.3	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	99.8	79.4	123
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	98.9	81.7	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	98.1	78.3	124
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	101	79.9	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	95.2	76.9	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	106	80.9	130
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	87.7	70.0	121
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	103	80.4	130
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	95.8	70.2	123
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	85.7	67.9	122
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	85.3	65.8	123
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	90.1	65.8	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5291177)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	71.5	58.6	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5293422)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	860 mg/kg	95.0	75.0	128



Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5293422) - continued								
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	2770 mg/kg	96.5	82.0	123
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1520 mg/kg	101	82.4	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5291177)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	71.2	59.3	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5293422)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1130 mg/kg	95.4	77.0	130
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	3730 mg/kg	97.2	81.5	120
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	260 mg/kg	84.0	73.3	137
EP080: BTEXN (QCLot: 5291177)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	62.4	61.6	117
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	76.1	65.8	125
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	79.8	65.8	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	80.1	64.8	134
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	83.1	68.7	132
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	82.7	61.8	123

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery(%)	Acceptable Limits (%)	
					MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5291182)							
EM2316214-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	105	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	89.7	79.7	116
		EG005T: Chromium	7440-47-3	50 mg/kg	# 72.6	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	# Not Determined	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	# 170	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	# 254	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	# 225	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5291183)							
EM2316214-002	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	# Not Determined	76.0	116



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike Concentration	SpikeRecovery(%) MS	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5293423)							
EM2316277-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	97.9	77.2	116
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	99.4	65.5	136
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5291177)							
EM2316277-001	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	49.7	33.4	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5293422)							
EM2316277-005	Anonymous	EP071: C10 - C14 Fraction	----	860 mg/kg	97.1	71.2	125
		EP071: C15 - C28 Fraction	----	2770 mg/kg	95.8	75.6	122
		EP071: C29 - C36 Fraction	----	1520 mg/kg	97.6	78.0	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5291177)							
EM2316277-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	42.0	30.8	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5293422)							
EM2316277-005	Anonymous	EP071: >C10 - C16 Fraction	----	1130 mg/kg	94.7	72.2	128
		EP071: >C16 - C34 Fraction	----	3730 mg/kg	95.9	76.5	119
		EP071: >C34 - C40 Fraction	----	260 mg/kg	95.1	66.8	138
EP080: BTEXN (QCLot: 5291177)							
EM2316277-001	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	67.7	54.4	127
		EP080: Toluene	108-88-3	2 mg/kg	76.9	57.1	131



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: EM2316280	Page	: 1 of 5
Client	: SCAADA ENVIRONMENTAL PTY LTD	Laboratory	: Environmental Division Melbourne
Contact		Telephone	: +6138549 9645
Project	: J246707	Date Samples Received	: 11-Sep-2023
Site	: ----	Issue Date	: 14-Sep-2023
Sampler	: Slaed	No. of samples received	: 2
Order number	: J246707	No. of samples analysed	: 2

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	EM2316214--002	Anonymous	Chromium	7440-47-3	72.6 %	79.0-121%	Recovery less than lower data quality objective
EG005(ED093)T: Total Metals by ICP-AES	EM2316214--002	Anonymous	Copper	7440-50-8	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	EM2316214--002	Anonymous	Lead	7439-92-1	170 %	80.0-120%	Recovery greater than upper data quality objective
EG005(ED093)T: Total Metals by ICP-AES	EM2316214--002	Anonymous	Nickel	7440-02-0	254 %	78.0-120%	Recovery greater than upper data quality objective
EG005(ED093)T: Total Metals by ICP-AES	EM2316214--002	Anonymous	Zinc	7440-66-6	225 %	80.0-120%	Recovery greater than upper data quality objective
EG035T: Total Recoverable Mercury by FIMS	EM2316214--002	Anonymous	Mercury	7439-97-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055) T1_6923,	T2_6923	06-Sep-2023	----	----	----	12-Sep-2023	20-Sep-2023	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) T1_6923,	T2_6923	06-Sep-2023	12-Sep-2023	04-Mar-2024	✓	12-Sep-2023	04-Mar-2024	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) T1_6923,	T2_6923	06-Sep-2023	12-Sep-2023	04-Oct-2023	✓	13-Sep-2023	04-Oct-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) T1_6923,	T2_6923	06-Sep-2023	13-Sep-2023	20-Sep-2023	✓	13-Sep-2023	23-Oct-2023	✓



Matrix: SOIL

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

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080) T1_6923, T2_6923	06-Sep-2023	12-Sep-2023	20-Sep-2023	✓	12-Sep-2023	20-Sep-2023	✓	
Soil Glass Jar - Unpreserved (EP071) T1_6923, T2_6923	06-Sep-2023	13-Sep-2023	20-Sep-2023	✓	13-Sep-2023	23-Oct-2023	✓	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080) T1_6923, T2_6923	06-Sep-2023	12-Sep-2023	20-Sep-2023	✓	12-Sep-2023	20-Sep-2023	✓	
Soil Glass Jar - Unpreserved (EP071) T1_6923, T2_6923	06-Sep-2023	13-Sep-2023	20-Sep-2023	✓	13-Sep-2023	23-Oct-2023	✓	
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080) T1_6923, T2_6923	06-Sep-2023	12-Sep-2023	20-Sep-2023	✓	12-Sep-2023	20-Sep-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	Method	Count		Rate (%)			Quality Control Specification
		QC	Reaular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Moisture Content	EA055	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	12.50	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).
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)
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).
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.
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.



9

CLIENT: SCAADA	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)		5 Days		FOR LABORATORY USE ONLY (Circle)			
OFFICE: GEELONG			COC SEQUENCE NUMBER (Circle)		Custody Seal Intact?	Yes	No	N/A
PROJECT: J246707			COC 1 2 3 4 5 7		Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
ORDER NUMBER: J246707			OF: 1 2 3 4 5 7		Random Sample Temperature on Receipt	°C		
PROJECT MANA	CONTACT PH: 0427 868 377		RELINQUISHED BY:		RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:	
SAMPLER:	SAMPLER MOBILE:		Slaed Norris		FD			
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):		DATE/TIME:		11/9 11:45	DATE/TIME:		
Email Reports to : SCAADA@ESDAT.COM.AU ; SERVICES@SCAADA.COM.AU ; LABRESULTS@SCAADA.COM.AU ; slaed.norris@scaada.com.au			DATE/TIME:		08/09/2023	DATE/TIME:		
Email Invoice to : ACCOUNTS@SCAADA.COM.AU			DATE/TIME:			DATE/TIME:		

LAB USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) <small>Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).</small>													Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE <i>(refer to codes below)</i>	TOTAL BOTTLES	R21	R20	R20A	B10	B7	VOA	pH	R1	B1	Asbestos	HOLD		
1	T1_6923	6/09/2023	Soil	Glass Jar (Teflon)	1													
2	T2_6923	6/09/2023	Soil	Glass Jar (Teflon)	1													
					TOTAL													

Environmental Division
Melbourne
Work Order Reference
EM2316280



Telephone : + 61-3-8549 9600

8/9/23 @ 11:00 AM
 13.7°C
 Date/Time
 Chilled Temp:
 Correction:
 Final Temp:
 Rec'd by
 ALE EF
 11/09

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
 V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic;
 F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

APPENDIX D – SOIL BORE LOGS

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-025 - Site Soil Assessment	04	Thursday, 8 June 2023



SOIL BORE LOG

BORE ID: BH01

Project ID:	J246707	Time / Date:	6/09/2023
Location / Address:	43 The Boulevard, Norlane, VIC	Logged By:	
Client:	Wathaurong Aboriginal Cooperative Limited	Drill Method:	Push Tube
Coordinates:	-38.099481, 144.351282	Drill Rig:	DRS HV1
Drilling Company:	Drill Worx	Drilled By:	Jason
PID Analyser:	N/A	Hole Diameter:	90 mm
Page Number:	1 of 1	Total Hole Depth:	2.8 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT minor sand, Dark brown with clumps of white, Angular black reflective rocks from 0.4-0.6mBGL					
0.5	FILL: FINE SAND, Black, Loose					
0.6	FILL: FINE SAND, Red, Loose	BH01_0.6				Attempted sample of red sands, sample mixed with black bands due to layer being too thin.
0.7	FILL: FINE SAND, Black, Loose					
1.2	FILL: CLAY, Orange, Dry, Ash, Low plasticity, Papers	BH01_1.4				
1.6	FILL: SUSPECTED LANDFILL, Compressed rubbish					Paper distinguishable
1.7	FILL: CLAY, Orange/yellow/white/red/darkbrown, Dry, Low plasticity					
1.8	NATURAL: CLAY, Yellow, Moist, High plasticity					
2.8	Refusal at 2.8 mBGL	BH01_2.7				Dark brown band soil band observed at 2.6 mBGL
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH02

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Push Tube
Coordinates: -38.099291, 144.351274	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 90 mm
Page Number: 1 of 1	Total Hole Depth: 6.2 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILTY CLAY, Yellow/dark brown, Roots, Dry, Low plasticity					
0.5	FILL: SANDY SILT, Black, Loose, Dry	BH02_0.6				End of this layer was a lighter brown.
1	FILL: SILT minor sand, Grey, Roots, Dry, Loose	BH02_1.2				
1.6	FILL: CLAY, Dark brown/red/orange, Moist, Debris throughout including metal, glass and concrete					
2.9	FILL: SILTY CLAY, Dark brown/red/orange, Moist, Low plasticity, Small white objects	BH02_3.7				Small white objects suspected to be shell fragments.
4.1	FILL: SILTY CLAY, Dark brown/red/orange, Moist, Low plasticity, Small white objects, large quantity of angular coarse gravel (Some pulverised) throughout	BH02_4.2				
4.3	FILL: SILTY CLAY, Dark brown/red/orange, Moist, Low plasticity, Small white objects, Decomposing organic material					
4.6	FILL: CLAY, Yellow					
4.8	FILL: SILTY CLAY, Dark brown/red/orange, Moist, Low plasticity, Small white objects, Decomposing organic material					
6	NATURAL: CLAY, Yellow, Moist, High plasticity					
6.2	End of Hole at 6.2 mBGL					

Well Construction Details		
Backfill:	Base:	Top:
Screen:	Base:	Top:
Sand:	Base:	Top:
Bento:	Base:	Top:
Grout:	Base:	Top:
Gatic:	Flush	Stick-up

Additional Comments:

From 1.6-6.0 layers alternated frequently, suspected to be within Landfill. Only obviously distinguishable layers have been noted.



SOIL BORE LOG

BORE ID: BH03

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Push Tube
Coordinates: -38.099140, 144.351378	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 90 mm
Page Number: 1 of 1	Total Hole Depth: 2.0 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT, Light brown/dark brown, Black reflective rock, Slag					
0.3	FILL: SAND, Black, Loose					
0.4	FILL: SILT minor sand, Orange, Dry, Loose, Debris (Metal and Glass)					
0.8	FILL: CLAY, White/orange/black/red/dark brown, Debris (Glass)					
0.9	FILL: SAND, Black, Loose, White material, Subrounded fine gravel	BH03_0.9				Sample is of white material
1.4	FILL: CLAY, Light brown, Low plasticity, Dry, Debris (Glass), White material					
1.9	SAND, Yellow					
2	End of hole at 2.0 mBGL					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH04

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Push Tube
Coordinates: -38.098965, 144.351401	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 90 mm
Page Number: 1 of 1	Total Hole Depth: 2.5 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT, Dark brown, Moist, Stiff					
0.2	FILL: SILT trace sand, Red/brown, Dry, Stiff	BH04_0.3				
0.5	NATURAL: CLAY, Yellow, Dry, High plasticity					
2.2						Layer of rounded fine-medium gravel observed
2.5	End of hole at 2.5 mBGL	BH04_2.3, D2_6923 & T2_6923				
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH05

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Push Tube
Coordinates: -38.099118, 144.351161	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 90 mm
Page Number: 1 of 1	Total Hole Depth: 2.7 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT, Light brown, Stiff, Dry					
0.3	FILL: SAND, Black, Loose, Pockets of red sand					
0.5	FILL: SILT, Brown/black, Rubbish throughout including Paper, Glass, Metal, Rocks, Wood, Red sand, White material and unknown materials	BH05_1.0				
1.4	FILL: SAND, Red, Loose	BH05_1.4				
1.45	FILL: SAND, Black, Loose	BH05_1.5				Weak hydrocarbon like odour
2	FILL: Flakey black painted material	BH05_Debris2.0				Sample debris is black flakey material
2.1	FILL: CLAY, Dark brown/dark red/black, Moist, High plasticity, Sub angular fine gravel					
2.6	FILL: CLAY, Red,black,dark brown, High Plasticity, Charcoal	BH05_2.6				
2.7	End of hole 2.7 mBGL					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH06

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Push Tube
Coordinates: -38.099277, 144.351162	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 90
Page Number: 1 of 1	Total Hole Depth: 4.8 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILTY CLAY, Dark brown, Low plasticity, Sub angular coarse gravel					Coarse gravel encountered at 0.2 mBGL
0.7	FILL: SILTY CLAY, Light brown, Dry, Low plasticity, Sub angular coarse sand and fine gravel	BH06_0.9				
1.1	FILL: SILTY CLAY, Black/dark brown/red, Moist, Sub angular and angular fine and medium gravel, Debris (Concrete)	BH06_1.6				
2.2	FILL: Layered pink/purple rock					
2.4	FILL: SUSPECTED LANDFILL: CLAY and Rubbish including Paper, Glass, Bricks, Rubber, Fibrous material, Suspected asbestos-containing material	BH06_Debris4.0-4.8				Mild hydrocarbon like odour in pocket of black soil
		BH06_Debris4.4				Malthoid
		BH06_Debris4.5				Fibro-cement
4.8	Refusal at 4.8 mBGL					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH07

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Push Tube
Coordinates: -38.099497, 144.351128	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 90 mm
Page Number: 1 of 1	Total Hole Depth: 5.4 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SANDY SILT, Loose, Dry					
0.4	FILL: SAND, Red, Porous white material	BH07_0.5				
0.55	FILL: CLAY, Dark brown, Roots, Dry, Low plasticity					
0.7	FILL: SAND, Black, Loose, Debris (Glass)	BH07_0.8				
1	FILL: CLAY, Orange, Moist, High plasticity, Debris (Glass)					
1.1	FILL: Pockets of red sand					
1.3	FILL: CLAY, White/yellow/black, Moist, Low plasticity, Sub angular and sub rounded fine gravel					Rocks with vesicles observed at 3.5, 4.1 and 4.7 mBGL
5.2	SAND minor clay, Yellow, Moist, Stiff	BH07_5.3				
5.4	Refusal at 5.4 mBGL					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH08

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Push Tube
Coordinates: -38.099460, 144.350837	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 90 mm
Page Number: 1 of 1	Total Hole Depth: 2.7 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT, Light brown, Loose					
0.2	FILL: Black rock					
0.3	FILL: SAND, Black, Loose, Debris (Glass)					
0.4	FILL: Pocket of red sand	BH08_0.4				
0.5	FILL: CLAY, Grey, Dry, Flat rocks (5 mm x 20 mm)	BH08_0.6				Unable to determine plasticity
0.8	FILL: SILT, Dark brown, Stiff, Angular fine and medium gravel, Debris (Terracotta and Plastic)	BH08_1.0				
1.2	FILL: CLAY, Yellow/white/black, High plasticity					
1.4	FILL: SAND, Black, Loose					
1.5	FILL: SILTY CLAY, Grey, Low plasticity	BH08_1.6				
1.7	FILL: SUSPECTED LANDFILL: CLAY, Red/dark brown/orange/white/yellow, Debris(Plastic, Glass, Concrete, Metal, Paper)	BH08_2.4				Sample contains soil clump with visible blue staining. Staining only observed to one clod of soil.
2.5	FILL: DEBRIS (Concrete, Glass, Timber)					
2.7	End of hole at 2.7 mBGL					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH09

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Auger & Push Tube
Coordinates: -38.099263, 144.350942	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 150 mm & 90 mm
Page Number: 1 of 1	Total Hole Depth: 5.5 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT, Brown, Debris (Glass, Brick, Ceramic tiles, Fibro-cement, Metal, Rubber, Concrete, Rope (Woven textile), Bone), Stiff, Red soil pockets throughout layer	BH09_Debris0-1.0 BH09_0.4 BH09_Debris0.5				5x Fibro cement and residual woven textile rope suspected to be asbestos-containing Sample is woven textile rope
1	FILL: SANDY SILT, Dark brown, Dry, Loose, Rocks, Debris (Rubber, Concrete, Glass, Fibro-cement)					
1.6	FILL: CLAY, Light brown/orange/black, Debris (Ceramic tiles), Low plasticity					
2.1	FILL: CONCRETE/ROAD BASE MATERIAL	BH09_2.0				
2.4	FILL: CLAY, White/orange/black/red/dark brown, High plasticity, Moist					
2.8	FILL: CLAY, White/yellow/light brown, Dry, Debris(Ceramic tile, Plastics and Metal)					
3.2	FILL: SILTY CLAY, Black/brown/red, Debris	BH09_3.3 BH09_3.7				Debris not identifiable, too small.
3.8	FILL: CONCRETE (Debris)					
3.9	FILL: MATERIAL, Black	BH09_3.9				Strong hydrocarbon like odour
4	FILL: CLAY, Light brown, Moist, High plasticity, Pockets of black material	BH09_4.9 BH09_5.4 BH09_5.5				Black material presented mild hydrocarbon like odour
5.5 5.55	CLAY, Yellow/white, Moist, High plasticity Refusal at 5.5 mBGL					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:

Auger only used in first meter of investigation due to asbestos risk.

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-031 - Soil Bore Log Template	03	Wednesday, 1 February 2023



SOIL BORE LOG

BORE ID: BH10

Project ID: J246707	Time / Date: 6/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Auger and Push Tube
Coordinates: -38.099425, 144.350759	Drill Rig: DRS HV1
Drilling Company: Drill Worx	Drilled By: Jason
PID Analyser: N/A	Hole Diameter: 150 mm & 90 mm
Page Number: 1 of 1	Total Hole Depth: 5.0 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT, Brown, Debris (Glass, Brick, Ceramic tiles, Fibro-cement, Metal, Rubber, Concrete, Rope (Woven textile)), Stiff, Red soil pockets throughout layer	BH10_Debris0-1.0 BH10_0.4 BH10_1.0 BH10_Debris1.0-1.5 BH10_1.5				6x Fibro-cement 3x Fibro-cement
1.6	FILL: SILTY CLAY, Dark brown/orange, Moist, Low plasticity, Layer of gravel road base at end of layer	BH10_2.2				
2.3	FILL: CLAY, White	BH10_2.5				
2.9	FILL: SUSPECTED LANDFILL: CLAY, Red/dark brown/orange/white, Low plasticity, Debris (Plastic, Glass, Ceramic tiles, Metal, Paper)	BH10_3.8, D1_060923 & T1_060923				
4.3	FILL: CLAY, Orange/dark brown, Surrounded by sand					
4.9	FILL: CLAY, Black, Moist, Debris (Glass)	BH10_4.9				Strong hydrocarbon like odour
5	Refusal at 5.0 mBGL					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:

Auger only used in first meter of investigation due to asbestos risk.



SOIL BORE LOG

BORE ID: BH11

Project ID: J246707	Time / Date: 8/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Hand Auger
Coordinates: -38.099014, 144.351197	Drill Rig: N/A
Drilling Company: Drill Worx	Drilled By: Slaed Norris
PID Analyser: N/A	Hole Diameter: 100 mm
Page Number: 1 of 1	Total Hole Depth: 0.5 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT minor sand, Dark brown, Angular coarse sand and fine/medium/coarse gravel, Flat rocks (10-30 mm) Loose, Dry					
0.3	FILL: SILT, Brown, Stiff, Debris (Glass and Metal), Clumps of yellow clay throughout, Angular medium gravel	BH11_0.4				
0.5	Refusal at 0.5 mBGL - Unable to bring spoil out of hole					
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH12

Project ID: J246707	Time / Date: 8/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Hand Auger
Coordinates: -38.098601, 144.351379	Drill Rig: N/A
Drilling Company: Drill Worx	Drilled By: Slaed Norris
PID Analyser: N/A	Hole Diameter: 100 mm
Page Number: 1 of 1	Total Hole Depth: 0.7 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SILT trace sand, Dark brown, Loose, Dry					
0.3	FILL: SILT minor clay, Dark brown, Stiff					
0.35	FILL: SILTY CLAY, White/yellow, High plasticity, Sub angular coarse sand/fine gravel					
0.7	End of hole at 0.7 mBGL	BH12_0.6				
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH13

Project ID: J246707	Time / Date: 8/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Hand Auger
Coordinates: -38.099212, 144.350657	Drill Rig: N/A
Drilling Company: Drill Worx	Drilled By: Slaed Norris
PID Analyser: N/A	Hole Diameter: 100 mm
Page Number: 1 of 1	Total Hole Depth: 0.3 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SANDY SILT, Brown, Angular and subangular fine/medium/coarse gravel, Loose, Debris (Metal and Fibro-cement)	BH13_Debris0.2				Large concrete layer visible in side wall of borehole 1x Fibro-cement
0.3	Refusal at 0.3 mBGL - No further safe access, spoil unable to be removed from hole.	BH13_0.3				
Well Construction Details						
						Backfill: Base: Top:
						Screen: Base: Top:
						Sand: Base: Top:
						Bento: Base: Top:
						Grout: Base: Top:
						Gatic: Flush Stick-up

Additional Comments:



SOIL BORE LOG

BORE ID: BH15

Project ID: J246707	Time / Date: 8/09/2023
Location / Address: 43 The Boulevard, Norlane, VIC	Logged By:
Client: Wathaurong Aboriginal Cooperative Limited	Drill Method: Hand Auger
Coordinates: -38.098730, 144.351182	Drill Rig: N/A
Drilling Company: Drill Worx	Drilled By:
PID Analyser: N/A	Hole Diameter: 100 mm
Page Number: 1 of 1	Total Hole Depth: 0.15 mBGL

Depth (m)	Lithologic Description	Sample ID	Sample Type	Recovery	VOC (ppm)	Comments / Details
0	FILL: SANDY SILT, Dark brown, Loose, Debris (Fibro-cement, Concrete and Terracotta)	BH15_Debris<0.1				Unknown depth of asbestos sample, located in spoil (1x Fibro-cement)
0.15	Refusal at 0.15 mBGL - Concrete protrusion	BH15_0.1				

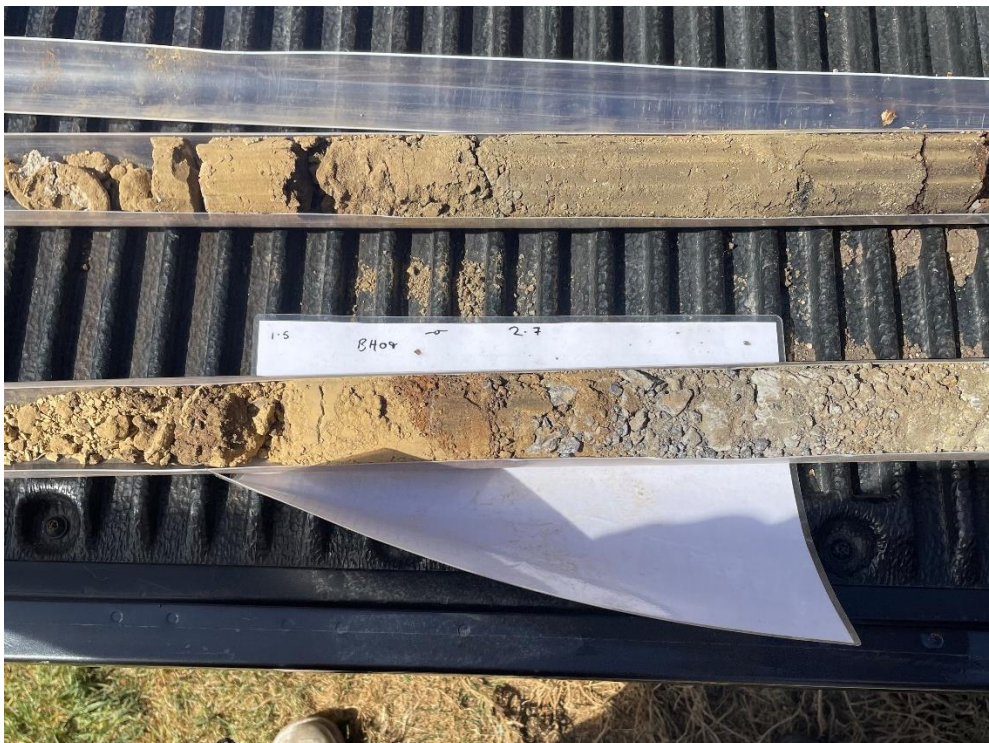
Well Construction Details		
Backfill:	Base:	Top:
Screen:	Base:	Top:
Sand:	Base:	Top:
Bento:	Base:	Top:
Grout:	Base:	Top:
Gatic:	Flush	Stick-up

Additional Comments:

APPENDIX E – SITE PHOTOGRAPHS



Photograph 1: Surface domain, Silt, Brown, Inert debris, BH10.



Photograph 2: Road base/Concrete, BH09.

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-025 - Site Soil Assessment	04	Thursday, 8 June 2023



Photograph 3: Red sands, BH01.



Photograph 4: Black sands, BH01.

Document Number & Name	Version	Correct as at:
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Photograph 5: Material suspected to be from the landfill cell, BH05.



Photograph 6: Material suspected to be from the landfill cell, BH06.

Document Number & Name	Version	Correct as at:
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Photograph 7: Blue staining observed to soil clod within suspected landfill of BH08.



Photograph 8: Clay, Black, Hydrocarbon like odour, BH06.

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-025 - Site Soil Assessment	04	Thursday, 8 June 2023



Photograph 9: Sandy clay, Yellow, BH07.



Photograph 10: Assumed Natural: Clay, Yellow.

Document Number & Name	Version	Correct as at:
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Photograph 11: Non asbestos-containing black malleable bituminous material, BH05.



Photograph 12: Assumed asbestos-containing fibro-cement sheet, BH06.

Document Number & Name	Version	Correct as at:
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Photograph 13: Non asbestos-containing woven textile, BH09.

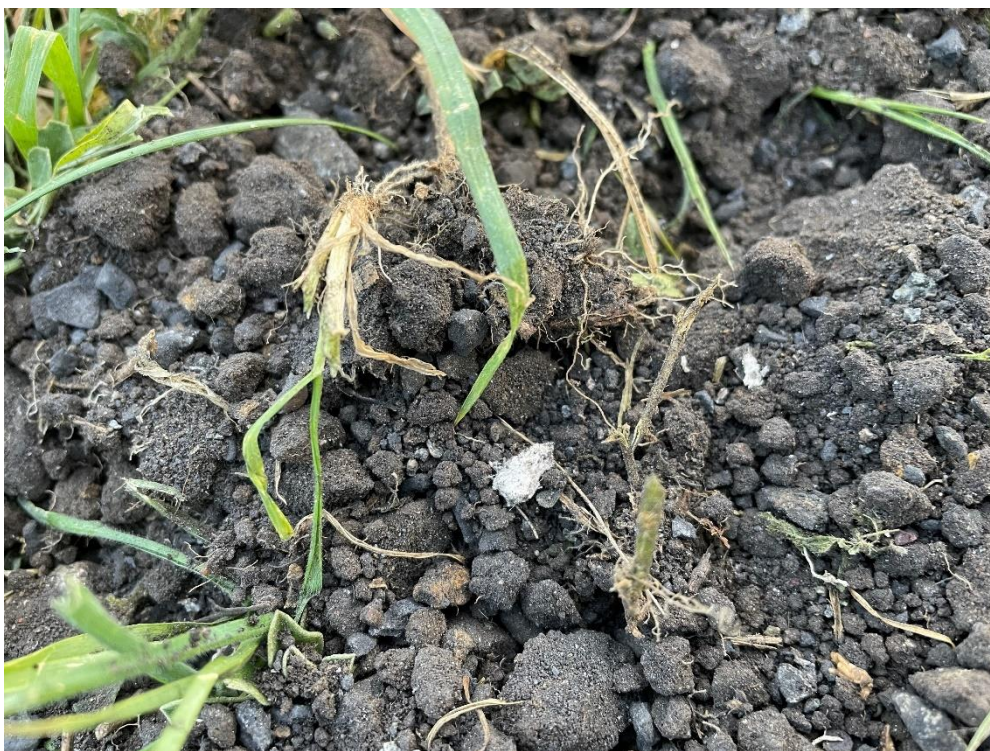


Photograph 14: Assumed asbestos-containing fibro-cement sheet debris, BH10.

Document Number & Name	Version	Correct as at:
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Photograph 15: Friable asbestos-containing cement product, BH16.



Photograph 16: Potentially friable asbestos-containing cement products pending further investigation, BH16.

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-025 - Site Soil Assessment	04	Thursday, 8 June 2023

APPENDIX F – PROUCL CALCULATIONS

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-025 - Site Soil Assessment	04	Thursday, 8 June 2023

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2												
3	User Selected Options											
4	Date/Time of Computation		ProUCL 5.2 21/09/2023 4:06:14 PM									
5	From File		WorkSheet.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Arsenic											
12												
13	General Statistics											
14	Total Number of Observations				11		Number of Distinct Observations				10	
15							Number of Missing Observations				0	
16	Minimum				4.9		Mean				36.82	
17	Maximum				170		Median				15	
18	SD				48.72		Std. Error of Mean				14.69	
19	Coefficient of Variation				1.323		Skewness				2.381	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.683		Shapiro Wilk GOF Test					
23	1% Shapiro Wilk Critical Value				0.792		Data Not Normal at 1% Significance Level					
24	Lilliefors Test Statistic				0.275		Lilliefors GOF Test					
25	1% Lilliefors Critical Value				0.291		Data appear Normal at 1% Significance Level					
26	Data appear Approximate Normal at 1% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL				63.44		95% Adjusted-CLT UCL (Chen-1995)				72.25	
31							95% Modified-t UCL (Johnson-1978)				65.2	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.565		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.754		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.197		Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value				0.263		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				0.933		k star (bias corrected MLE)				0.739	
42	Theta hat (MLE)				39.45		Theta star (bias corrected MLE)				49.79	
43	nu hat (MLE)				20.53		nu star (bias corrected)				16.27	
44	MLE Mean (bias corrected)				36.82		MLE Sd (bias corrected)				42.82	
45							Approximate Chi Square Value (0.05)				8.151	
46	Adjusted Level of Significance				0.0278		Adjusted Chi Square Value				7.233	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL				73.48		95% Adjusted Gamma UCL				82.8	
50												

	A	B	C	D	E	F	G	H	I	J	K	L
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic					0.927	Shapiro Wilk Lognormal GOF Test					
53	10% Shapiro Wilk Critical Value					0.876	Data appear Lognormal at 10% Significance Level					
54	Lilliefors Test Statistic					0.179	Lilliefors Lognormal GOF Test					
55	10% Lilliefors Critical Value					0.231	Data appear Lognormal at 10% Significance Level					
56	Data appear Lognormal at 10% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data					1.589	Mean of logged Data					2.982
60	Maximum of Logged Data					5.136	SD of logged Data					1.139
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL					122.8	90% Chebyshev (MVUE) UCL					72.86
64	95% Chebyshev (MVUE) UCL					90.16	97.5% Chebyshev (MVUE) UCL					114.2
65	99% Chebyshev (MVUE) UCL					161.3						
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL					60.98	95% BCA Bootstrap UCL					73.18
72	95% Standard Bootstrap UCL					59.66	95% Bootstrap-t UCL					95.86
73	95% Hall's Bootstrap UCL					143.6	95% Percentile Bootstrap UCL					61.99
74	90% Chebyshev(Mean, Sd) UCL					80.89	95% Chebyshev(Mean, Sd) UCL					100.8
75	97.5% Chebyshev(Mean, Sd) UCL					128.6	99% Chebyshev(Mean, Sd) UCL					183
76												
77	Suggested UCL to Use											
78	95% Student's-t UCL					63.44						
79												
80	The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.											
81	Please verify the data were collected from random locations.											
82	If the data were collected using judgmental or other non-random methods,											
83	then contact a statistician to correctly calculate UCLs.											
84												
85	When a data set follows an approximate distribution passing only one of the GOF tests,											
86	it is suggested to use a UCL based upon a distribution passing both GOF tests in ProUCL											
87												
88	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
89	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
90	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
91												
92												
93	Copper											
94												
95	General Statistics											
96	Total Number of Observations					11	Number of Distinct Observations					11
97							Number of Missing Observations					0
98	Minimum					6.2	Mean					6869
99	Maximum					57000	Median					66
100	SD					17476	Std. Error of Mean					5269

	A	B	C	D	E	F	G	H	I	J	K	L
101	Coefficient of Variation					2.544	Skewness					2.852
102												
103	Normal GOF Test											
104	Shapiro Wilk Test Statistic					0.471	Shapiro Wilk GOF Test					
105	1% Shapiro Wilk Critical Value					0.792	Data Not Normal at 1% Significance Level					
106	Lilliefors Test Statistic					0.467	Lilliefors GOF Test					
107	1% Lilliefors Critical Value					0.291	Data Not Normal at 1% Significance Level					
108	Data Not Normal at 1% Significance Level											
109												
110	Assuming Normal Distribution											
111	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
112	95% Student's-t UCL					16419	95% Adjusted-CLT UCL (Chen-1995)					20377
113							95% Modified-t UCL (Johnson-1978)					17174
114												
115	Gamma GOF Test											
116	A-D Test Statistic					1.869	Anderson-Darling Gamma GOF Test					
117	5% A-D Critical Value					0.87	Data Not Gamma Distributed at 5% Significance Level					
118	K-S Test Statistic					0.418	Kolmogorov-Smirnov Gamma GOF Test					
119	5% K-S Critical Value					0.283	Data Not Gamma Distributed at 5% Significance Level					
120	Data Not Gamma Distributed at 5% Significance Level											
121												
122	Gamma Statistics											
123	k hat (MLE)					0.19	k star (bias corrected MLE)					0.199
124	Theta hat (MLE)					36156	Theta star (bias corrected MLE)					34557
125	nu hat (MLE)					4.18	nu star (bias corrected)					4.373
126	MLE Mean (bias corrected)					6869	MLE Sd (bias corrected)					15407
127							Approximate Chi Square Value (0.05)					0.874
128	Adjusted Level of Significance					0.0278	Adjusted Chi Square Value					0.653
129												
130	Assuming Gamma Distribution											
131	95% Approximate Gamma UCL					34354	95% Adjusted Gamma UCL					46002
132												
133	Lognormal GOF Test											
134	Shapiro Wilk Test Statistic					0.804	Shapiro Wilk Lognormal GOF Test					
135	10% Shapiro Wilk Critical Value					0.876	Data Not Lognormal at 10% Significance Level					
136	Lilliefors Test Statistic					0.281	Lilliefors Lognormal GOF Test					
137	10% Lilliefors Critical Value					0.231	Data Not Lognormal at 10% Significance Level					
138	Data Not Lognormal at 10% Significance Level											
139												
140	Lognormal Statistics											
141	Minimum of Logged Data					1.825	Mean of logged Data					4.93
142	Maximum of Logged Data					10.95	SD of logged Data					2.869
143												
144	Assuming Lognormal Distribution											
145	95% H-UCL					5736043	90% Chebyshev (MVUE) UCL					9916
146	95% Chebyshev (MVUE) UCL					13116	97.5% Chebyshev (MVUE) UCL					17557
147	99% Chebyshev (MVUE) UCL					26281						
148												
149	Nonparametric Distribution Free UCL Statistics											
150	Data do not follow a Discernible Distribution											

	A	B	C	D	E	F	G	H	I	J	K	L
151												
152	Nonparametric Distribution Free UCLs											
153	95% CLT UCL				15536		95% BCA Bootstrap UCL				22398	
154	95% Standard Bootstrap UCL				15282		95% Bootstrap-t UCL				2400648	
155	95% Hall's Bootstrap UCL				1417033		95% Percentile Bootstrap UCL				17205	
156	90% Chebyshev(Mean, Sd) UCL				22677		95% Chebyshev(Mean, Sd) UCL				29837	
157	97.5% Chebyshev(Mean, Sd) UCL				39775		99% Chebyshev(Mean, Sd) UCL				59296	
158												
159	Suggested UCL to Use											
160	95% Student's-t UCL				16419							
161												
162	The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.											
163	Please verify the data were collected from random locations.											
164	If the data were collected using judgmental or other non-random methods,											
165	then contact a statistician to correctly calculate UCLs.											
166												
167	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
168	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
169	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
170												
171												
172	Lead											
173												
174	General Statistics											
175	Total Number of Observations				11		Number of Distinct Observations				11	
176							Number of Missing Observations				0	
177	Minimum				8.4		Mean				1150	
178	Maximum				8000		Median				71	
179	SD				2560		Std. Error of Mean				771.9	
180	Coefficient of Variation				2.227		Skewness				2.428	
181												
182	Normal GOF Test											
183	Shapiro Wilk Test Statistic				0.522		Shapiro Wilk GOF Test					
184	1% Shapiro Wilk Critical Value				0.792		Data Not Normal at 1% Significance Level					
185	Lilliefors Test Statistic				0.469		Lilliefors GOF Test					
186	1% Lilliefors Critical Value				0.291		Data Not Normal at 1% Significance Level					
187	Data Not Normal at 1% Significance Level											
188												
189	Assuming Normal Distribution											
190	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
191	95% Student's-t UCL				2549		95% Adjusted-CLT UCL (Chen-1995)				3023	
192							95% Modified-t UCL (Johnson-1978)				2643	
193												
194	Gamma GOF Test											
195	A-D Test Statistic				1.4		Anderson-Darling Gamma GOF Test					
196	5% A-D Critical Value				0.821		Data Not Gamma Distributed at 5% Significance Level					
197	K-S Test Statistic				0.39		Kolmogorov-Smirnov Gamma GOF Test					
198	5% K-S Critical Value				0.276		Data Not Gamma Distributed at 5% Significance Level					
199	Data Not Gamma Distributed at 5% Significance Level											
200												

	A	B	C	D	E	F	G	H	I	J	K	L
201	Gamma Statistics											
202					k hat (MLE)	0.297				k star (bias corrected MLE)		0.276
203					Theta hat (MLE)	3875				Theta star (bias corrected MLE)		4159
204					nu hat (MLE)	6.527				nu star (bias corrected)		6.081
205					MLE Mean (bias corrected)	1150				MLE Sd (bias corrected)		2187
206										Approximate Chi Square Value (0.05)		1.681
207					Adjusted Level of Significance	0.0278				Adjusted Chi Square Value		1.333
208												
209	Assuming Gamma Distribution											
210					95% Approximate Gamma UCL	4158				95% Adjusted Gamma UCL		5243
211												
212	Lognormal GOF Test											
213					Shapiro Wilk Test Statistic	0.88				Shapiro Wilk Lognormal GOF Test		
214					10% Shapiro Wilk Critical Value	0.876				Data appear Lognormal at 10% Significance Level		
215					Lilliefors Test Statistic	0.253				Lilliefors Lognormal GOF Test		
216					10% Lilliefors Critical Value	0.231				Data Not Lognormal at 10% Significance Level		
217	Data appear Approximate Lognormal at 10% Significance Level											
218												
219	Lognormal Statistics											
220					Minimum of Logged Data	2.128				Mean of logged Data		4.719
221					Maximum of Logged Data	8.987				SD of logged Data		2.18
222												
223	Assuming Lognormal Distribution											
224					95% H-UCL	56118				90% Chebyshev (MVUE) UCL		2238
225					95% Chebyshev (MVUE) UCL	2920				97.5% Chebyshev (MVUE) UCL		3867
226					99% Chebyshev (MVUE) UCL	5726						
227												
228	Nonparametric Distribution Free UCL Statistics											
229	Data appear to follow a Discernible Distribution											
230												
231	Nonparametric Distribution Free UCLs											
232					95% CLT UCL	2419				95% BCA Bootstrap UCL		2966
233					95% Standard Bootstrap UCL	2384				95% Bootstrap-t UCL		53510
234					95% Hall's Bootstrap UCL	22261				95% Percentile Bootstrap UCL		2586
235					90% Chebyshev(Mean, Sd) UCL	3465				95% Chebyshev(Mean, Sd) UCL		4514
236					97.5% Chebyshev(Mean, Sd) UCL	5970				99% Chebyshev(Mean, Sd) UCL		8830
237												
238	Suggested UCL to Use											
239					95% Student's-t UCL	2549						
240												
241	The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.											
242	Please verify the data were collected from random locations.											
243	If the data were collected using judgmental or other non-random methods,											
244	then contact a statistician to correctly calculate UCLs.											
245												
246	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
247	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
248	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
249												
250												

	A	B	C	D	E	F	G	H	I	J	K	L
251	Nickel											
252												
253	General Statistics											
254	Total Number of Observations				11		Number of Distinct Observations				11	
255							Number of Missing Observations				0	
256	Minimum				19		Mean				105.5	
257	Maximum				500		Median				49	
258	SD				140.6		Std. Error of Mean				42.38	
259	Coefficient of Variation				1.333		Skewness				2.613	
260												
261	Normal GOF Test											
262	Shapiro Wilk Test Statistic				0.623		Shapiro Wilk GOF Test					
263	1% Shapiro Wilk Critical Value				0.792		Data Not Normal at 1% Significance Level					
264	Lilliefors Test Statistic				0.327		Lilliefors GOF Test					
265	1% Lilliefors Critical Value				0.291		Data Not Normal at 1% Significance Level					
266	Data Not Normal at 1% Significance Level											
267												
268	Assuming Normal Distribution											
269	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
270	95% Student's-t UCL				182.3		95% Adjusted-CLT UCL (Chen-1995)				210.9	
271							95% Modified-t UCL (Johnson-1978)				187.8	
272												
273	Gamma GOF Test											
274	A-D Test Statistic				0.862		Anderson-Darling Gamma GOF Test					
275	5% A-D Critical Value				0.749		Data Not Gamma Distributed at 5% Significance Level					
276	K-S Test Statistic				0.267		Kolmogorov-Smirnov Gamma GOF Test					
277	5% K-S Critical Value				0.262		Data Not Gamma Distributed at 5% Significance Level					
278	Data Not Gamma Distributed at 5% Significance Level											
279												
280	Gamma Statistics											
281	k hat (MLE)				1.114		k star (bias corrected MLE)				0.871	
282	Theta hat (MLE)				94.64		Theta star (bias corrected MLE)				121.1	
283	nu hat (MLE)				24.51		nu star (bias corrected)				19.16	
284	MLE Mean (bias corrected)				105.5		MLE Sd (bias corrected)				113	
285							Approximate Chi Square Value (0.05)				10.24	
286	Adjusted Level of Significance				0.0278		Adjusted Chi Square Value				9.189	
287												
288	Assuming Gamma Distribution											
289	95% Approximate Gamma UCL				197.4		95% Adjusted Gamma UCL				219.9	
290												
291	Lognormal GOF Test											
292	Shapiro Wilk Test Statistic				0.908		Shapiro Wilk Lognormal GOF Test					
293	10% Shapiro Wilk Critical Value				0.876		Data appear Lognormal at 10% Significance Level					
294	Lilliefors Test Statistic				0.217		Lilliefors Lognormal GOF Test					
295	10% Lilliefors Critical Value				0.231		Data appear Lognormal at 10% Significance Level					
296	Data appear Lognormal at 10% Significance Level											
297												
298	Lognormal Statistics											
299	Minimum of Logged Data				2.944		Mean of logged Data				4.147	
300	Maximum of Logged Data				6.215		SD of logged Data				0.964	

	A	B	C	D	E	F	G	H	I	J	K	L	
301													
302	Assuming Lognormal Distribution												
303					95% H-UCL	246					90% Chebyshev (MVUE) UCL	182.9	
304					95% Chebyshev (MVUE) UCL	222.7					97.5% Chebyshev (MVUE) UCL	277.9	
305					99% Chebyshev (MVUE) UCL	386.2							
306													
307	Nonparametric Distribution Free UCL Statistics												
308	Data appear to follow a Discernible Distribution												
309													
310	Nonparametric Distribution Free UCLs												
311					95% CLT UCL	175.2					95% BCA Bootstrap UCL	223.5	
312					95% Standard Bootstrap UCL	173.1					95% Bootstrap-t UCL	302.7	
313					95% Hall's Bootstrap UCL	384.9					95% Percentile Bootstrap UCL	183.2	
314					90% Chebyshev(Mean, Sd) UCL	232.6					95% Chebyshev(Mean, Sd) UCL	290.2	
315					97.5% Chebyshev(Mean, Sd) UCL	370.1					99% Chebyshev(Mean, Sd) UCL	527.2	
316													
317	Suggested UCL to Use												
318					95% H-UCL	246							
319													
320	The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.												
321	Please verify the data were collected from random locations.												
322	If the data were collected using judgmental or other non-random methods,												
323	then contact a statistician to correctly calculate UCLs.												
324													
325	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
326	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.												
327	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												
328													
329													
330	Zinc												
331													
332	General Statistics												
333					Total Number of Observations	11					Number of Distinct Observations	11	
334											Number of Missing Observations	0	
335					Minimum	17					Mean	2207	
336					Maximum	19000					Median	140	
337					SD	5650					Std. Error of Mean	1704	
338					Coefficient of Variation	2.56					Skewness	3.159	
339													
340	Normal GOF Test												
341					Shapiro Wilk Test Statistic	0.447					Shapiro Wilk GOF Test		
342					1% Shapiro Wilk Critical Value	0.792					Data Not Normal at 1% Significance Level		
343					Lilliefors Test Statistic	0.424					Lilliefors GOF Test		
344					1% Lilliefors Critical Value	0.291					Data Not Normal at 1% Significance Level		
345	Data Not Normal at 1% Significance Level												
346													
347	Assuming Normal Distribution												
348	95% Normal UCL						95% UCLs (Adjusted for Skewness)						
349					95% Student's-t UCL	5295					95% Adjusted-CLT UCL (Chen-1995)	6744	
350											95% Modified-t UCL (Johnson-1978)	5565	

	A	B	C	D	E	F	G	H	I	J	K	L
351												
352	Gamma GOF Test											
353	A-D Test Statistic				1.13		Anderson-Darling Gamma GOF Test					
354	5% A-D Critical Value				0.817		Data Not Gamma Distributed at 5% Significance Level					
355	K-S Test Statistic				0.293		Kolmogorov-Smirnov Gamma GOF Test					
356	5% K-S Critical Value				0.275		Data Not Gamma Distributed at 5% Significance Level					
357	Data Not Gamma Distributed at 5% Significance Level											
358												
359	Gamma Statistics											
360	k hat (MLE)				0.315		k star (bias corrected MLE)				0.29	
361	Theta hat (MLE)				6997		Theta star (bias corrected MLE)				7610	
362	nu hat (MLE)				6.94		nu star (bias corrected)				6.381	
363	MLE Mean (bias corrected)				2207		MLE Sd (bias corrected)				4098	
364					Approximate Chi Square Value (0.05)				1.837			
365	Adjusted Level of Significance				0.0278		Adjusted Chi Square Value				1.469	
366												
367	Assuming Gamma Distribution											
368	95% Approximate Gamma UCL				7665		95% Adjusted Gamma UCL				9590	
369												
370	Lognormal GOF Test											
371	Shapiro Wilk Test Statistic				0.938		Shapiro Wilk Lognormal GOF Test					
372	10% Shapiro Wilk Critical Value				0.876		Data appear Lognormal at 10% Significance Level					
373	Lilliefors Test Statistic				0.172		Lilliefors Lognormal GOF Test					
374	10% Lilliefors Critical Value				0.231		Data appear Lognormal at 10% Significance Level					
375	Data appear Lognormal at 10% Significance Level											
376												
377	Lognormal Statistics											
378	Minimum of Logged Data				2.833		Mean of logged Data				5.531	
379	Maximum of Logged Data				9.852		SD of logged Data				2.066	
380												
381	Assuming Lognormal Distribution											
382	95% H-UCL				68172		90% Chebyshev (MVUE) UCL				4122	
383	95% Chebyshev (MVUE) UCL				5359		97.5% Chebyshev (MVUE) UCL				7076	
384	99% Chebyshev (MVUE) UCL				10449							
385												
386	Nonparametric Distribution Free UCL Statistics											
387	Data appear to follow a Discernible Distribution											
388												
389	Nonparametric Distribution Free UCLs											
390	95% CLT UCL				5009		95% BCA Bootstrap UCL				7357	
391	95% Standard Bootstrap UCL				4920		95% Bootstrap-t UCL				50335	
392	95% Hall's Bootstrap UCL				32781		95% Percentile Bootstrap UCL				5583	
393	90% Chebyshev(Mean, Sd) UCL				7318		95% Chebyshev(Mean, Sd) UCL				9633	
394	97.5% Chebyshev(Mean, Sd) UCL				12846		99% Chebyshev(Mean, Sd) UCL				19158	
395												
396	Suggested UCL to Use											
397	95% Student's-t UCL				5295							
398												
399	The calculated UCLs are based on assumptions that the data were collected in a random and unbiased manner.											
400	Please verify the data were collected from random locations.											

	A	B	C	D	E	F	G	H	I	J	K	L
401	If the data were collected using judgmental or other non-random methods,											
402	then contact a statistician to correctly calculate UCLs.											
403												
404	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
405	Recommendations are based upon data size, data distribution, and skewness using results from simulation studies.											
406	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
407												

APPENDIX G – EIL CALCULATIONS

Document Number & Name	Version	Correct as at:
SG-T4-E-FRM-025 - Site Soil Assessment	04	Thursday, 8 June 2023

Inputs
Select contaminant from list below
Cr_III
Below needed to calculate fresh and aged ACLs
Enter % clay (values from 0 to 100%)
3.7
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
7
or for aged ABCs only
Enter State (or closest State)
VIC
Enter traffic volume (high or low)
low

Outputs		
Land use	Cr III soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	110	100
Urban residential and open public spaces	190	300
Commercial and industrial	270	490

Inputs	
Select contaminant from list below	
	Cu
Below needed to calculate fresh and aged ACLs	
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)	
	19
Enter soil pH (calcium chloride method) (values from 1 to 14)	
	8.6
Enter organic carbon content (%OC) (values from 0 to 50%)	
	0.1
Below needed to calculate fresh and aged ABCs	
Measured background concentration (mg/kg). Leave blank if no measured value	
or for fresh ABCs only	
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration	
	7
or for aged ABCs only	
Enter State (or closest State)	
	VIC
Enter traffic volume (high or low)	
	low

Outputs		
Land use	Cu soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	50	45
Urban residential and open public spaces	80	120
Commercial and industrial	110	170

Inputs
Select contaminant from list below
Ni
Below needed to calculate fresh and aged ACLs
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)
19
Below needed to calculate fresh and aged ABCs
Measured background concentration (mg/kg). Leave blank if no measured value
or for fresh ABCs only
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
7
or for aged ABCs only
Enter State (or closest State)
VIC
Enter traffic volume (high or low)
low

Outputs		
Land use	Ni soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	35	50
Urban residential and open public spaces	110	260
Commercial and industrial	190	450

Inputs	
Select contaminant from list below	Zn
Below needed to calculate fresh and aged ACLs	
Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)	19
Enter soil pH (calcium chloride method) (values from 1 to 14)	8.6
Below needed to calculate fresh and aged ABCs	
Measured background concentration (mg/kg). Leave blank if no measured value	
or for fresh ABCs only	
Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration	7
or for aged ABCs only	
Enter State (or closest State)	VIC
Enter traffic volume (high or low)	low

Outputs		
Land use	Zn soil-specific EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	100	190
Urban residential and open public spaces	290	710
Commercial and industrial	440	1100