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NORDON JAGO ARCHITECTS

Additional Site Investigation

71 Fig Hill Lane, Dunmore NSW

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Copies		Recipient
1	Soft Copy (PDF – Secured, issued by email)	Mr Stephen Nordon Nordon Jago Architects Level 4, 111-117 Devonshire Street, Surry Hills NSW 2010
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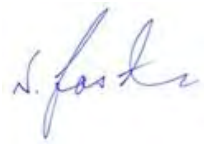
Author	Technical Reviewer
	
CLARE MADIGAN **Environmental Scientist**	**NATHAN FOSTER** **Senior Environmental Scientist**

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Background

Mr Stephen Nordon of Nordon Jago Architects ('the Client') engaged EI Australia (EI) to conduct an Additional Site Investigation (ASI) for the purpose of characterising the quality of fill material at 71 Fig Hill Lane, Dunmore NSW ('the site'). The environmental assessment was completed as part of the Development Application (DA) process through Shellharbour City Council to allow for the redevelopment of the site.

Objectives

The main objectives of the assessment were to:

- To investigate the degree of any potential contamination by means of limited intrusive sampling and laboratory analysis, for relevant contaminants of potential concern (COPC); and
- Where contamination is identified in the proposed deep soil area, make recommendations for the appropriate management of this contamination.

Findings

Based on the findings of this assessment it was concluded that:

- Historically the site was a vacant block of grassed land with vegetation (potentially farmland), until it was cleared some time prior to 2004. By 2009 a large residential dwelling with associated sheds had been constructed. The site was occupied by this structure at present day;
- A site walkover inspection completed by EI on 24 July 2019, indicated the following:
  - The property was surrounded by overgrown vegetation (including shrubs, bushes small trees and grasses);
  - All structures on the site had been covered in graffiti;
  - The concrete hardstand evident adjacent the southern site boundary was in good conditions with no cracking/deformation evident;
  - Underlying the abandoned mansion was a series of underground tunnels leading to a potential basement carpark in the northern part of the site;
  - Building rubble (including terracotta, granite tile and brick fragments) was evident everywhere surrounding the property, including several piles of excess building waste; and
  - Burnt car remnants were evident adjacent the cliff (southern site boundary), whilst burnt building rubble remnants were evident west of the property.
- Soil sampling collected at twenty (20) test pit locations across the site, indicated that:
  - The subsurface conditions generally consisted of shallow gravelly sandy clay fill material, overlying residual silty clay and latite bedrock; and
  - All tested analytes for the soil samples collected from test pits TP101 to TP120 were below the adopted health investigation and screening levels (HIL/HSL) and the adopted ecological investigation and screening levels (EIL/ESL), with the following exceptions:

  - Sample TP107_1.8-1.9 exceeded the HIL-A criteria for chromium with a concentration of 180 mg/kg; and
  - Sample TP120_0.6-0.7 exceeded the EIL criteria for nickel with a concentration of 150 mg/kg.

- The elevated chromium concentrations reported in soils is likely to be inherently related to the intermediary - mafic mineralogical composition of the latite geology which underlies the site. Furthermore, a 95% UCL chromium concentration (derived from all samples) of 40.2 mg/kg indicates that chromium concentrations across the investigation area are acceptable for the intended land use;
- The nickel exceedance for TP120_0.6-0.7 was located in the vicinity of the proposed car park. As such, the material is suitable to remain onsite based on the HIL-A criteria;

Conclusions and Recommendations

Based on the findings of this report, conducted in accordance with the investigation scope agreed with the Client and with consideration of the Statement of Limitations (**Section 13**), EI conclude that widespread contamination was not identified during this investigation that would likely constrain the proposed development. As such, soil is considered to be of suitable quality for the proposed use. Recommendations to ensure the suitability of the site is maintained during redevelopment are outlined below:

- Prior to the demolition of the existing building, a Hazardous Materials Survey will need to be completed to determine the extent and type of potentially hazardous building products that may be released to the environment during demolition and removal;
- Should hazardous materials be found in the existing buildings, following demolition an asbestos clearance should be undertaken in the vicinity of the building footprints by a visual inspection / walkover, to ensure that all hazardous materials (if any are confirmed present) have been removed adequately during demolition and the ground surface is free of residual contamination;
- During site redevelopment, the following may need to be undertaken:
  - Any material being removed from the site (including virgin excavated natural materials (VENM)) should be classified for off-site disposal in accordance with the EPA (2014) Waste Classification Guidelines;
  - Any material being imported to the site should be assessed for potential contamination in accordance with the EPA guidelines as being suitable for the intended use or be classified as VENM; and
  - Should unexpected finds (contamination) be encountered during works a qualified environmental consultant should be engaged to inspect the finds and offer the appropriate environmental/ waste guidance.

1. Introduction

1.1 Background and Purpose

Mr Stephen Nordon of Nordon Jago Architects ('the Client') engaged EI Australia (EI) to conduct an Additional Site Investigation (ASI) for the purpose of characterising the quality of fill material at 71 Fig Hill Lane, Dunmore NSW ('the site').

The site is located approximately 22 km south of the Wollongong Central Business District (CBD) (**Figure1**). The site comprises Lot 3 in DP 17776 and is situated within the Local Government Area (LGA) of Shellharbour City Council, covering a total area of approximately 39 ha. However, the proposed development area is limited to the north-western portion of the site (approx. 2 ha), as shown in **Figure 2**. This area of the site is currently occupied by an abandoned two-storey residential dwelling with associated structures.

This assessment was conducted to support a Development Application (DA) to Shellharbour City Council for the redevelopment of the site. Additionally, the purpose of this assessment is to enable the developer to meet the requirements of *State Environmental Planning Policy 55* (SEPP55) - *Remediation of Land*, *Shellharbour Development Control Plan 2013,* and obligations under the *Contaminated Land Management Act 1997* (CLM Act) for the assessment and management of contaminated soil and/or groundwater.

1.2 Proposed Development

Based on the proposed development plans (Nordon Jago Architects, Job No. CON00116, dated 22 February 2019) provided by the Client, EI understands that site redevelopment will involve the demolition of the existing structures and the construction of an eco-tourist facility (as shown in **Figure 2** and **Appendix C**). It is understood that the development will incorporate three lodges connected by walkways and an open air car park in the north-western corner of the site. Based on the development plans the buildings appeared to be slab-on-grade, with no basement constructions. Furthermore, it is assumed the areas surrounding the buildings will be landscaped.

1.3 Regulatory Framework

The following regulatory framework and guidelines were considered during the preparation of this report:

- Contaminated Land Management Act 1997;
- EPA (1995) Sampling Design Guidelines;
- EPA (2017) Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme;
- NEPM (2013) Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater;
- NEPM (2013) Schedule B(2) Guideline on Site Characterisation;
- OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites;
- Shellharbour City Council Development Control Plan 2013;
- Shellharbour City Council Local Environmental Plan 2013; and

- State Environment Protection Policy 55 (SEPP 55) Remediation of Land under the Environmental Planning and Assessment Act 1997.

1.4 Project Objectives

The primary objectives of this ASI were to:

- To investigate the degree of any potential contamination by means of limited intrusive sampling and laboratory analysis, for relevant contaminants of potential concern (COPC); and
- Where contamination is identified in the proposed deep soil area, make recommendations for the appropriate management of this contamination.

1.5 Scope of Works

In accordance with EI fee proposal P17412.1 (dated 16 July 2019), the following scope of works were proposed to achieve the above listed objectives:

1.5.1 Desktop Study

- A review of relevant topographical, geological, hydrogeological and soil landscape maps for the project area;
- A review of available previous environmental reports;
- Search of historical aerial photographs archived at Shellharbour City Council's online mapping collection to review previous site use and the historical sequence of land development in the neighbouring area; and
- A review of existing underground services on site.

1.5.2 Field Work & Laboratory Analysis

- The preparation of a Work Health, Environment and Safety Plan (WHESP);
- A detailed site walkover inspection;
- The construction of test pits at twenty (20) locations distributed across the proposed development area, using an excavator (supplied by the Client);
- Multiple level soil sampling within fill and natural soils; and
- Laboratory analysis of selected soil samples for relevant analytical parameters as determined from the site history survey and field observations during the investigation programme.

1.5.3 Data Analysis and Reporting

An Additional Site Investigation (ASI) report would also be prepared to document desk study findings, the conceptual site model, data quality objectives, investigation methodologies, and results. The report would also provide a record of observations made during the detailed site walkover inspection, borehole logs, and a discussion of laboratory analytical results in regards to potential risks to human health, the environment, and the aesthetic uses of the land.

2. Site Description

2.1 Property Identification, Location and Physical Setting

The site identification details and associated information are presented in **Table 2-1**, while the site locality is shown in **Figure 1**.

Table 2-1 Site Identification, Location and Zoning

Attribute	Description
Street Address	71 Fig Hill Lane, Dunmore NSW
Location Description	The site is situated approximately 22 km south of Wollongong central business district (CBD), and bound by farmland with residential dwellings north and west, dense forest coverage and Minnamurra River to the south and east.
Site Coordinates	North-eastern corner of site (datum GDA94-MGA56): Easting: 302162.985 Northing: 6166757.894 (Source: http://maps.six.nsw.gov.au)
Site Area	Approx. 2.0 ha (Source: Nordon Jago Architects, Survey Plan, Job No. CON00116, dated 22 February 2019)
Lot and Deposited Plan (DP)	Lot 3 in DP 17776
State Survey Marks	One State Survey Marks (SS) is situated in close proximity to the site (<200 m): ▪ SS32030 is approx. 15 m north of the site, situated in the neighbouring paddock; (Source: http://maps.six.nsw.gov.au)
Local Government Authority	Shellharbour City Council
Parish	Terragong
County	Camden
Current Zoning	RU2 – Rural Landscape (Shellharbour Local Environment Plan 2013)
Current Land Uses	The site is currently occupied by a large two-storey abandoned and unfinished residential building. The building is surrounded by overgrown grasses and vegetation, gravel and concrete surfaces, and a large quantity of building rubble.

2.2 Surrounding Land Use

The site is situated within an area of mixed land uses and current uses. Current uses of surrounding land are described in **Table 2-2**.

Table 2-2 Surrounding Land Uses

Direction Relative to Site	Land Use Description	Sensitive Receptors (& distance from site)
North	Farmland and paddocks with minor tree coverage, followed by residential dwellings (farmhouses).	Residential dwelling (<200 m north)
South	Dense forest coverage, followed by Minnamurra River and Minnamurra Township.	Kiama Golf Course (< 690 m south-east) Minnamurra Public School (<1 km south-east)
East	Residential dwelling with associated farmland, followed by dense forest coverage and Minnamurra River.	Residential dwelling (<90 m east) Minnamurra River (<320 m south-east) Trevethan Reserve (<530 m east) James Holt Reserve (<960m east)
West	Residential dwelling, with associated farmland, followed by Fig Hill Lane & Princes Highway.	Residential dwelling (<100 m west)

Overall, sensitive land uses, such as schools or childcare centres, were not identified within the vicinity (100 m or hydraulically down-gradient) of the site.

2.3 Regional Setting

Regional topography, geology, soil landscape and hydrogeological information are summarised in **Table 2-3**.

Table 2-3 Regional Setting Information

Attribute	Description
Topography	The regional topography is described as rolling low hills with benched slopes and coastal headlands with cliffs and extensive rock platforms on Bumbo Latite (Bombo area). Local relief is 40 m to 100 m and slope gradients are moderately inclined from 15 to 25%, with isolated steep (25 to 40%) slopes (Hazelton, 1992). The local topography of the site slightly declines in a south to south-east direction with elevations ranging from 43 mAHD in the north to 37 mAHD in the south. It is also noted the cliff directly south of the development area has a sharp decline south, with elevations decreasing a short distance from 37 mAHD to 29 mAHD (Nordon Jago Architects, Job No. CON00116, dated 22 February 2019).
Site Drainage	Site drainage is likely to be consistent with the natural slope of the site (south-east) or as direct infiltration into the exposed soils. Surface water runoff is likely to flow into natural waterways (Minnamurra River).
Regional Geology	With reference to the 1:50 000 scale Geological Series Sheet 9028-1 (Kiama) the site is likely to be underlain by Bumbo Latite (Psgb). Bumbo Latite is described as *aphanitic to porphyritic latite.* Bumbo Latite is part of the Gerringong Volcanic Facies formation in the Shoalhaven Group.
Soil Landscapes	The Soil Conservation of NSW Soil Landscapes of the Kiama 1:100,000 Sheet (Hazelton, 1992) indicated that the site overlies an Erosional Soil Landscape – Bombo (bo).

Attribute	Description
Acid Sulfate Soil Risk	With reference to the Albion Park Acid Sulfate Soil Risk Map (1:25,000 scale; Tulau, 1997), the subject land lies within the map class description of 'No Known Occurrence'. In such cases, acid sulfate soils (ASS) are not know or expected to occur and "land management activities are not likely to be affected by ASS materials". With reference to the Shellharbour Local Environmental Plan (LEP) 2013 Acid Sulfate Soils Map (Sheet ASS_026), the subject land lies within an area not classed as acid sulfate soils. Based on location and topography of the site, it is not expected that acid sulfate soils will be encountered during site redevelopment.
Likelihood & Depth of Filling	Based on observations the current investigation the average fill depth across the site is approximately 1.1 m thick, comprising sandy, gravelly clay filling. However, the fill was notably deeper in the area south of the dwelling to at least 3 mBGL.
Typical Soil Profile	The soil profile across the site consisted of shallow topsoil, sandy, gravelly clay fill, overlying silty clay and latite bedrock. **Topsoil –** Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, trace roots, moist, no odour **Fill –** Sandy CLAY; medium to high plasticity, light grey/green with mottled orange, fine to medium grained, moist, no odour; Gravelly CLAY; low plasticity, brown to dark grey, with latite gravels, with minor brick fragments, moist, no odour; CLAY; low to medium plasticity, orange brown mottled red, with minor fine to medium grained sand, with minor latite gravels, moist, no odour; Silty CLAY; low plasticity, orange brown, with fine to medium grained sand, with trace roots, moist, no odour; **Natural –** Silty CLAY; medium plasticity, dark brown, trace root fibres, moist, no odour; and **Bedrock –** LATITE; dark grey/ dark blue.
Depth to Groundwater	Groundwater was not encountered during this assessment. Groundwater is expected to be deep in this area, given the site is located on a steep ridge and is underlain by hard volcanic latite bedrock. EI note, that the previous investigations (Martens, 2019b) did not encounter groundwater.
Nearest Surface Water Feature	Minnamurra River, located approx. 350 m to the east.
Anticipated Groundwater Flow Direction	Groundwater is inferred to flow in an east to south-east direction towards Minnamurra River.

2.4 Groundwater Bore Records and Groundwater Use

An online search of registered groundwater bores within the vicinity of the site was conducted by EI on 18 September 2019 through Water NSW (https://www.waternsw.com.au/supply/real-time-data). No registered bores were identified within a 500 m radius of the site (**Appendix D**).

2.5 Site Walkover Inspection

A number of observations were made by an EI staff member during a detailed site inspection undertaken during the investigation on 24 July 2019. A summary of site observations is detailed

below and site photographs taken during the inspection are present in **Appendix E**. Site observations have been recorded for the entire site and are summarised below:

- The site is currently occupied by an abandoned dwelling structure that appears to have never been completed (i.e. there was no windows and no electricity). Surrounding the dwelling the land was composed of gravel or concrete hardstand surfaces, with dense overgrown vegetation and grasses (**Appendix E**, Photographs 12 & 13);
- Underlying the dwelling structure was a series of underground tunnels leading to a potential basement carpark in the northern part of the site (**Appendix E**, Photograph 11);
- Building rubble (including terracotta, granite tile, and brick fragments) was evident everywhere surrounding the property, including several piles of excess building waste (**Appendix E**, Photographs 4, 9, 10 & 11);
- Burnt car remnants were evident adjacent to the cliff (southern site boundary), whilst burnt building rubble remnants were evident west of the property (**Appendix E**, Photographs 1, 2 & 3);
- A total of four (4) groundwater monitoring wells were evident amongst the overgrown grass surrounding the property. All wells were intact, each with a 1 m stick-up encased in a steel casing;
- The concrete hardstand evident adjacent the southern site boundary was in good conditions with no cracking/deformation evident (**Appendix E**, Photographs 5, 11 & 12);
- Gravels were evident surrounding the property as remnants of the former driveway;
- Underground services were evident beneath the ground surface, however they were never connected to the property;
- The property was surrounded by overgrown vegetation (including shrubs, bushes small trees and grasses). All vegetation was generally in good, healthy conditions with the overgrown grasses approximately 0.5 m high (**Appendix E**, Photographs 4, 5 & 6);
- The property was previously rendered and painted – which may contain potential lead-based paint;
- All structures on the site had been covered in graffiti (**Appendix E**, Photographs 9 & 11);
- Anecdotal information provided by the site contact on the 22 July 2019, indicated the following:
  - Prior to the development, the site was a farm;
  - The property was constructed from 2002 to 2007 and was never completed;
  - From 2007 onwards, the property was never finished and the site was abandoned; and
  - During the development the tradesmen were never paid, so after construction of the property was discontinued tradesmen destroyed as much of the house as they could (i.e. smashing floor tiles).
- Anecdotal information provided by the neighbour on the western side of the property on the 24 July 2019, indicated the following:
  - The previous site owner had consent from Council to build a property on the site, but never submitted architectural plans to Council for the proposed development. It was stated that the owner started to anyway;

- Council became involved when they found out the previous site owner had illegally cleared a road down to the river, and construction of the property was subsequently halted; and
- Currently, children/teenagers break into the abandoned property frequently.

3. Previous Investigations

3.1 Available documents

This report follows on from the previous investigations completed at the site provided by the Client:

- Martens Consulting Engineers (2019a) *Preliminary Acid Sulfate Soils Assessment: Proposed Eco Tourist Facility – 71 Fig Hill Lane, Dunmore NSW* (Ref. P1907197JR02V01, dated 18 June 2019); and
- Martens Consulting Engineers (2019b), *Preliminary Geotechnical Assessment: Proposed Eco Tourist Facility – 71 Fig Hill Lane, Dunmore NSW* (Ref P1907197JR01v01, dated 28 June 2019).

A summary of the works and key findings is outlined below in **Table 3-1**.

Table 3-1 Summary of Previous Investigation Works and Findings

Assessment Details	Project Tasks and Findings
Preliminary Acid Sulfate Soil Assessment (Martens, 2019a)	
Objective & Scope	A preliminary acid sulphate soil assessment was undertaken in support of a development application to council. This involved the drilling of 12 borehole locations and the measurement of groundwater levels in the previously installed groundwater monitoring wells. *EI note there was no specific project objective and no laboratory analytical results were included within this report.*
Key Findings	The key findings from this investigation is outlined below: ▪ The geomorphic features of acid sulfate soils from ASSMAC (1998) were considered to be unlikely or not present onsite. Based on this, it was concluded that the presence of actual or potential acid sulfate soils was considered low.
Conclusions and Recommendations	Based on the fill/bedrock profile present across the site, ASS were not expected to be encountered. It was concluded that further investigations for an ASSA or ASSMP were not required. Additionally, based on the proposed development, the groundwater table will likely not be intercepted. If the material is not consistent with that identified during this investigation, than a consultant should be contacted for further testing and advice.
Preliminary Geotechnical Assessment (Martens, 2019b)	
Objective	The purpose of this investigation was to undertake a preliminary geotechnical assessment, including slope instability risk assessment, to inform civil design.
Key Findings	The key findings from this investigation (and relevant to the ASI) are outlined below: ▪ The sub-surface profile consisted of: ‣ Fill – either Gravelly CLAY or Silty CLAY; ‣ Residual soil – Silty Gravelly CLAY; and ‣ Weathered latite bedrock. ▪ Groundwater standing water levels (SWLs) were gauged between 6.35 to 6.47 mBGL. Based on the proposed development, site topography and encountered sub-surface soil profile, groundwater is not expected to be encountered during development.

4. Site History

4.1 Historic Aerial Review

A review of the historical aerial photographs available from Shellharbour City Council's online mapping archives was undertaken by EI during this investigation. A summary of past potential land use is presented in **Table 4-1**. The historical aerial photographs reviewed as part of this DSI included:

- **1948:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/**;**
- **1961:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/**;**
- **2004:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/**;**
- **2006:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/;
- **2009:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/;
- **2011:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/;
- **2012:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/;
- **2013:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/;
- **2014:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/;
- **2016:** Online Mapping, Shellharbour City Council, http://www.mapping.shellharbour.nsw.gov.au/IntraMaps90/; and
- **2018:** Six Maps, dated 21 June 2018, https://maps.six.nsw.gov.au/.

Table 4-1 Summary of Historical Aerial Photography

Site description based on historical aerial photographs	Potential Land Uses
1948: The site was a vacant block of land. The site was grass paddock with minor shrubs evident sporadically across the site.	Vacant / Farm Land
1961: The site appeared unchanged from 1948.	Vacant / Farm Land
2004: The entire site had been cleared of vegetation and exposed soil was evident.	Cleared land under development for proposed residential use
2006: The site appeared predominantly unchanged from 2004, however excavations were evident outlining potential tunnels/ basement. The southern site boundary appeared to have been raised and levelled accordingly with the rest of the site. A dirt road was apparent between the trees south of the property.	Cleared land under development for proposed residential use
2009: A large residential structure was evident in the centre of the site, with surrounding surfaces finished with gravel and concrete hardstand. Notable smaller garage-like structures were evident surrounding the dwelling. The embankment south of the property had been cleared of trees. The road south of the property appeared to have been finished with two additional gravel roads joining it, with one meandering east towards Minnamurra River.	Residential Dwelling
2011: The site appeared predominantly unchanged from 2009, however the gravelled surfaces (particularly east of the site) now appeared to be covered in grass – this included the three gravel roads south of the property. The garage directly west of the dwelling had been demolished with debris and excess building materials evident surrounding the dwelling. The property appeared to have been abandoned. Some minor shrubs/bushes appeared to be growing on the embankment south of the property.	Residential Dwelling
2012: The site appeared unchanged from 2011.	Residential Dwelling
2013: The site appeared predominantly unchanged from 2012, however the grassed/vegetated areas surrounding the dwelling was very dense and die-back was evident in some areas.	Residential Dwelling
2014: The site appeared predominantly unchanged from 2013, however there appeared to be small stockpiles of debris scattered around the dwelling.	Residential Dwelling
2016: The site appeared predominantly unchanged from 2014, with the exception of the vegetation/grass surrounding the dwelling appeared to be dead. More bushes were evident on the embankment south of the property.	Residential Dwelling
2018: The site appeared unchanged from 2016.	Residential Dwelling

Overall, the site was a vacant block of grassed land with vegetation, until it was cleared some time prior to 2004. By 2009 a large residential dwelling with associated sheds had been constructed. The site was occupied by this structure at the time of the site visit.

4.2 Surrounding Land Use

As part of the review, an assessment of surrounding land uses using historical aerial photographs sourced from Shellharbour City Council's online mapping collection was carried out. A summary of the pertinent information identified at surrounding land parcels from the reviewed photographs is presented in **Table 4-2**.

Table 4-2 Summary of Aerial Photograph Review

Aerial Photograph	Surrounding land uses based on historical aerial photographs
1948 Shellharbour City Council	Surrounding land use immediately north, south, east, and west of the site appeared to vacant land. The land was grassed with minor sporadic shrub (bushes) and tree coverage evident. Further east and south of the site dense forest coverage is evident fronting Minnamurra River. North of the site a farm house is evident with paddocks further north and west.
1961 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 1948.
2004 Shellharbour City Council	Directly east and west of the site residential dwellings were evident, with vacant land surrounding the site north and west. Dense vegetation was still evident east and south of the site towards Minnamurra River. Further west of the site a large highway was under construction, with large dams and residential dwellings evident further west. Further north of the site a large quarry was present amongst the dense forest coverage.
2006 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 2004.
2009 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 2006. However, the quarry that was evident far north of the site appeared to have been infilled and capped with grass/gravel.
2011 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 2009. However, further north the potential former quarry appeared to be used as a tip.
2012 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 2011.
2013 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 2012.
2014 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 2013.
2016 Shellharbour City Council	Surrounding land use appeared predominantly unchanged from 2014.
2018 Six Maps	Surrounding land use appeared predominantly unchanged from 2016.

5. Conceptual Site Model

In accordance with NEPM (2013) *Schedule B2 – Guideline on Site Characterisation* and to aid in the assessment of data collection for the site, EI developed a conceptual site model (CSM) assessing plausible pollutant linkages between potential contamination sources, migration pathways and receptors. The CSM provides a framework for the review of the reliability and useability of the data collected and to identify data gaps in the existing site characterisation.

5.1 Subsurface Conditions

The overall geological conditions encountered during this assessment are summarised in **Table 9-1**. The subsurface conditions generally consisted of shallow gravelly sandy clay fill material, overlying residual silty clay and latite bedrock.

5.2 Potential Contamination Sources

On the basis of site history and search findings (described in **Sections 4** and **5**) EI consider potential contaminant hazards and onsite sources to be as follows:

- Potential filling soils of unknown origin and quality placed at the site (including building rubble);
- Deeper natural soils containing residual impacts, representing potential secondary sources of contamination;
- Possible impacts from historic use of pesticides beneath site structures and sealed surfaces; and
- Weathering of exposed building structures including, painted surfaces and metallic objects and cement-fibre sheeting.

5.3 Contaminants of Potential Concern

Based on the findings of the site contamination appraisal the contaminants of potential concern (COPC) at the site are considered to be:

- Soil – heavy metals (HMs), total recoverable hydrocarbons (TRH), polycyclic aromatic hydrocarbons (PAH), the monocyclic aromatic hydrocarbon (MAH) compounds: *benzene, toluene, ethylbenzene and xylenes* (BTEX), organochlorine and organophosphate pesticides (OCP/ OPP), polychlorinated biphenyls, and (PCB) asbestos.

5.4 Other Chemicals of Concern

5.4.1 Per or poly-fluoroalkyl substances (PFAS)

The EPA (2017) auditor guidelines and the PFAS National Environmental Management Plan (NEMP) (2018) require that PFAS is considered in assessing contamination. EI use the following decision tree (**Table 5-1**) based on EnRisk (2016) for prioritising the potential for PFAS to be present on site and whether PFAS sampling of soil and water is required.

Table 5-1 PFAS Decision Tree

Preliminary Screening	Decision
Did fire training occur on-site?	No
Did fire training occur, or is an airport or fire station up-gradient of or adjacent to the site? [1]	No
Have "fuel" fires ever occurred on-site? (e.g. ignition of fuel (solvent, petrol, diesel, kerosene) tanks?)	No
Have PFAS been used in manufacturing or stored on-site ?[2]	No
If Yes to any questions, has site analytical suite been optimised to include preliminary sampling and testing for PFAS in soil (ASLP Testing) and water?	**N/A**

Note 1 Runoff from fire training areas may impact surface water, sediment and groundwater.
Note 2 PFAS is used wide range of industrial processes and consumer products, including in the manufacture of non-stick cookware, specialised garments and textiles, Scotchguard™ and similar products (used to protect fabric, furniture, leather and carpets from oils and stains), metal plating and in some types of fire-fighting foam (https://www.nicnas.gov.au/chemical-information/factsheets/chemical-name/perfluorinated-chemicals-pfas)

5.4.2 Emerging Chemicals

The NSW EPA uses chemical control orders (CCOs) as a primary legislative tool under the EHC Act (1985) to selectively and specifically control particular chemicals of concern, and limit their potential impact on the environment. CCOs provide the EPA a rapid and flexible mechanism for responding to emerging chemical issues. As with PFAS, EI has considered chemicals controlled by CCOs and other potential emerging chemicals in this assessment as outline in **Table 5-2**.

Table 5-2 Emerging or controlled chemicals

Chemicals of Concern (CCO or emerging)	Decision
Were aluminium smelter wastes used or stored on site (CCO, 1986)?	No
Do dioxin contaminated wastes (CCO, 1986) have the potential to impact the site? [1]	No
Were organotin products (CCO, 1989) used or stored on site ?[2]	No
Were polychlorinated biphenyls (PCBs) used or PCB wastes (CCO, 1997) stored on-site?[3]	No
Were scheduled chemical or wastes (CCO, 2004) used or stored[4]	Yes *If OC pesticides were used onsite*
Are other emerging chemicals suspected?[5]	No
If Yes to any questions, has site sampling suite been optimised to include specific sampling for other chemicals of concern in soil, air and water	**Yes**

Note 1 From burning of certain chemicals, smelting or chemical manufacturing or fire on or near the site.
Note 2 From anti-fouling paints used or removed at boat & ship yards and marinas.
Note 3 From older transformer oils, electrical capacitors, and in some pesticides.
Note 4 Twenty-four mostly organochlorine pesticides and industrial by-products
Note 5 Other chemicals considered as emerging e.g. 1,4 dioxane (associated with some cVOCs),

5.5 Potential Sources, Exposure Pathways and Receptors

Potential contamination sources, exposure pathways and human and environmental receptors that were considered relevant for this assessment are summarised along with a qualitative assessment of the potential risks posed by complete exposure pathways in **Table 5-3**.

Table 5-3 Conceptual Site Model

Impacted Media	Potential Contaminants	Potential Sources	Transport Mechanism	Sensitive Receptor	Migration & Exposure Pathways	Potential Risk of Complete Exposure Pathway
Soil	HMs, TRH, BTEX, PAH, OCPs / OPPs, PCBs and Asbestos.	▪ Potential filling soils of unknown origin and quality placed at the site ▪ Possible impacts from historic use of pesticides ▪ Weathering of exposed building structures (i.e. painted surfaces, metallic objects and cement-fibre sheeting)	▪ Wind erosion ▪ Atmospheric dispersion ▪ Disturbance of soils during site redevelopment, future maintenance and use of accessible soil area(s)	▪ Future ecological receptors (e.g. site vegetation post redevelopment) ▪ Future construction and maintenance workers ▪ Future site users	▪ Soil ingestion ▪ Adsorption ▪ Dermal contact ▪ Inhalation ▪ Plant uptake	L – (should contamination to be present)
Building fabrics containing hazardous materials	Lead, PCB, SMF and asbestos	Building fabrics containing hazardous materials	Potential release of hazardous materials during the demolition of the former site structure	▪ Demolition workers ▪ Construction and maintenance workers	▪ Ingestion ▪ Dermal contact ▪ Inhalation of airborne contaminants	L – (should contamination to be present)

L = Low Risk; M = Moderate Risk; H = High Risk

5.6 Data Gaps

Based on information gathered from the site walkover inspection and review of site history information, EI considered a programme of intrusive investigation was warranted to sample soil across the site for potential sources of contamination (as listed in **Section 5.2**), via a targeted sampling approach. This will enable the following data gaps to be addressed during the intrusive investigation:

- Uncertainty in regards the current site structures containing potentially hazardous materials;
- Uncertainty in regards the weathering of exposed building structures;
- Unknown quality of fill and natural soils at the site; and
- Uncertainty in regards to possible impacts from historic use of pesticides beneath site structures and sealed surfaces.

6. Sampling, Analytical and Quality Plan (SAQP)

The SAQP ensures that the data collected during environmental works at the site are representative, and provide a robust basis for site assessment decisions. The SAQP includes the following:

- Data quality objectives, including a summary of the objectives of the ESA;
- Investigation methodology including media to be sampled, details of analytes and parameters to be monitored and a description of intended sampling points;
- Sampling methods and procedures;
- Field screening methods;
- Analysis Methods;
- Sample handling, preservation and storage; and
- Analytical QA/QC.

6.1 Data Quality Objectives (DQO)

In accordance with the US EPA (2006) *Data Quality Assessment* and the EPA (2017) *Guidelines for the NSW Site Auditor Scheme*, the process of developing Data Quality Objectives (DQO) was used by the EI assessment team to determine the appropriate level of data quality needed for the specific data requirements of the project. The DQO process that was applied for this assessment is documented in **Table 6-1**.

Table 6-1 Summary of Project Data Quality Objectives

DQO Steps	Details	Comments (changes during investigation)
1. State the Problem Summarise the contamination problem that will require new environmental data, and identify the resources available to resolve the problem; develop a conceptual site model	The purpose of the investigation is to obtain baseline data on soil conditions of the site located at 71 Fig Hill Lane, Dunmore NSW, prior to redevelopment. The site is going to be redeveloped with eco-lodges and landscaping (**Section 1.2**). This assessment is required in support of a development application to be submitted to Shellharbour City Council. Review of site use history and previous investigations found that the site was used vacant farmland until it was cleared and developed with a residential dwelling from 2002. There are a few potential contamination sources identified in the developed CSM (**Section 5**). A program of intrusive investigation was therefore required, to provide additional data for characterisation of the environmental conditions at the site.	-
2. Identify the Goal of the Study (Identify the decisions) Identify the decisions that need to be made on the contamination problem and the new environmental data required to make them	The decisions needed to be made are: ▪ Has the nature, extent and source of any soil impacts onsite been identified? ▪ What impact do the site specific, geologic and hydrogeological conditions have on the fate and transport of any impacts that may be identified? ▪ Does the level of impact coupled with the fate and transport of identified contaminants represent an unacceptable risk to identified human and/or environmental receptors on or offsite? ▪ Does the collected data provide sufficient information to allow the selection and design of an appropriate remedial strategy, if necessary?	-
3. Identify Information Inputs (Identify inputs to decision) Identify the information needed to support any decision and specify which inputs require new environmental measurements	The main inputs to the decision making process include: ▪ Proposed development plans and land use; ▪ Regional and site settings including site geology, topography and surrounding land uses; ▪ A review of previous investigations completed at the site; ▪ Review of site history information via aerial photograph collections and anecdotal information, and current site use from site inspection observations; ▪ Intrusive investigation sampling to characterise environmental conditions at targeted sampling points to evaluate the potential risks to sensitive receptors; ▪ Observations recorded during intrusive investigations; and ▪ Laboratory analytical results of soil samples collected.	-

DQO Steps	Details	Comments (changes during investigation)
4. Define the Boundaries of the Study Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision	Lateral – cadastral boundaries of the deep soil zones and the site. Vertical – from the existing ground level to a minimum of 0.5 m into the natural soil strata; and Temporal – results are valid on the day of sample collection and remain valid as long as no changes occur on site or contamination (if present) does not migrate on site or onto the site from offsite sources.	Lateral – test pits were not able to be drilled within the building foot print. Vertical – Shallow refusal on bedrock was encountered within some test pits.
5. Develop the Analytic Approach (Develop a decision rule) To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions	The decision rules for the investigation were: ▪ If the concentrations of contaminants in the soils data exceed adopted default land use criteria; then assess the need to further investigate the extent of impacts onsite; and ▪ Decision criteria for QA/QC measures are defined by the Data Quality Indicators (DQI) in **Table 6-2**.	-
6. Specify Performance or Acceptance Criteria (Specify limits on decision errors) Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data	Based on the qualitative data gathered via site history review and site walkover observations, a non-statistical judgemental sampling design was selected for performing this investigation. As the site investigation area has been predominantly greenfield historically, and only recently developed for residential purposes, areas subject to modification or development have been identified as areas of environmental concern (AEC) based identified contamination sources, known contaminants of concern, and professional judgement.	-

DQO Steps	Details	Comments (changes during investigation)
7. Develop the Detailed Plan for Obtaining Data (Optimise the design for obtaining data) Identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs	▪ Based on the proposed deep soil zone area of 2 ha, twenty (20) sampling points will be completed as per the requirements of EPA (1995); ▪ Soil sampling locations will be set using a judgemental sampling pattern across the site; ▪ An upper soil profile sample will be collected at each borehole location. Further sampling would also be carried out at deeper soil layers. These samples would be selected for testing based on field observations (including visual and olfactory evidence, as well as soil vapour screening in headspace samples) whilst giving consideration to characterise the subsurface soil stratigraphy; ▪ Representative soil samples collected from the site will be analysed for the COPC described in **Section 5.3** to assist with characterising soil quality; and ▪ Review of the results will be undertaken to determine if further intrusive investigation and additional sampling is warranted.	Soil characteristics were not able to be determined beneath the building footprints on the site.

6.2 Data Quality Indicators

To ensure that the investigation data collected was of an acceptable quality, the investigation data set was assessed against the data quality indicators (DQI) outlined in **Table 6-2**, which related to both field and laboratory-based procedures. The assessment of data quality is discussed in **Section 8**.

Table 6-2 Data Quality Indicators

Data Quality Objective	Data Quality Indicator	Acceptable Range
Accuracy	Field – Trip blank (laboratory prepared) Laboratory – Laboratory control spike and matrix spike	< laboratory limit of reporting (LOR) Prescribed by the laboratories
Precision	Field – Blind replicate and spilt duplicate Laboratory – Laboratory duplicate and matrix spike duplicate	< 30 % relative percentage difference (RPD [%]) Prescribed by the laboratories
Representativeness	Field – Trip blank (laboratory prepared) Laboratory – Method blank	< laboratory limit of reporting (LOR) Prescribed by the laboratories
Completeness	Completion (%)	-

7. Assessment Methodology

7.1 Sampling Rationale

With reference to the CSM described in **Section 5**, soil investigation works were planned in accordance with the following rationale:

- Sampling fill and natural soils from twenty (20) judgementally positioned test pit locations to characterise in-situ fill and natural soils; and
- Laboratory analysis of representative soil samples for the identified COPC.

7.2 Investigation Constraints

The number of test pits excavated during the ASI achieved the planned investigation scope described in **Section 7.1**. However, soils beneath the existing site structures (residential dwelling), could not be analysed during these investigations.

7.3 Assessment Criteria

The assessment criteria proposed for this project are outlined in **Table 7-1**. These were selected from available published guidelines that are endorsed by national or state regulatory authorities, with due consideration of the exposure scenario that is expected for various parts of the site, the likely exposure pathways and the identified potential receptors.

Table 7-1 Adopted Investigation Levels for Soil

Adopted Guidelines	Rationale
NEPM, 2013 Soil HILs, EILs, HSLs, ESLs & Management Limits for TPHs	**Soil Health-based Investigation Levels (HILs)** All soil samples will be assessed against the NEPM 2013 HIL-A thresholds for residential sites with accessible soils/gardens. Given the site will be used as Eco-lodge resort with accessible soils and landscaping, HIL-A was applied as the most conservative criteria. **Soil Health-based Screening Levels (HSLs)** <u>Hydrocarbon HSLs:</u> The NEPM 2013 Soil HSL-A&B thresholds for low-high density residential sites for vapour intrusion would be applied (given the area assessed will be the proposed deep soil area), to assess for potential human health impacts from residual vapours resulting from petroleum, BTEX & naphthalene. <u>Asbestos HSLs:</u> WADOH (2009) assessment criteria, as presented in NEPM (2013), were not adopted during this investigation. Presence / absence of asbestos (not-detected) were utilised for preliminary screening purposes. **Ecological Investigation Levels (EILs)** Soil samples will be assessed against the NEPM 2013 EILs on residential sites for areas of the site designated for landscaping. Soil samples will be compared against the NEPM EILs for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene which have been derived for protection of terrestrial ecosystems. Adopted Added Contaminant Levels (ACL) and Ambient Background Concentrations (ABC) were used for the derivation of copper, chromium (III), nickel, lead and zinc EILs. Generic EILs were adopted for ecological assessment in relation to arsenic, DDT and naphthalene.

Adopted Guidelines	Rationale
	Ecological Screening Levels (ESLs) Soil samples will be assessed against the NEPM 2013 ESLs for selected petroleum hydrocarbons & TRH fractions for protection of terrestrial ecosystems on residential sites. **Management Limits for Petroleum Hydrocarbons** Should the ESLs and HSLs be exceeded for petroleum hydrocarbons, soil samples will also be assessed against the NEPM 2013 *Management Limits* for the TRH fractions F1 – F4 to assess propensity for phase-separated hydrocarbons (PSH), fire and explosive hazards & adverse effects on buried infrastructure.

For the purposes of this investigation, the adopted soil assessment criteria are referred to as the Soil Investigation Levels (SILs). SILs are presented alongside the analytical results in the corresponding summary tables, which are discussed in **Section 9**.

7.4 Soil Investigation

The soil investigation works conducted at the site are described in **Table 7-2**. Test bore locations are illustrated in **Figure 2**.

Table 7-2 Summary of Soil Investigation Methodology

Activity/Item	Details
Fieldwork	The site investigation was conducted on 24 July 2019. The aim of the investigation was to characterise the soil conditions of the site.
Drilling Method & Investigation Depth	The test pits were constructed by using a client-supplied excavator. Excavations were completed to 100mm below the top of the natural profile or refusal, to ensure no remnant impacts from the fill material. Final test pit depths were as follows: ▪ 0.5 mBGL for TP101; ▪ 0.4 mBGL for TP102; ▪ 0.6 mBGL for TP103; ▪ 1.0 mBGL for TP104; ▪ 0.7 mBGL for TP105; ▪ 1.1 mBGL for TP106; ▪ 2.0 mBGL for TP107; ▪ 1.0 mBGL for TP108; ▪ 1.0 mBGL for TP109; ▪ 1.5 mBGL for TP110; ▪ 1.5 mBGL for TP111; ▪ 0.7 mBGL for TP112; ▪ 3.0 mBGL for TP113; ▪ 0.6 mBGL for TP114; ▪ 1.3 mBGL for TP115; ▪ 1.5 mBGL for TP116; ▪ 1.0 mBGL for TP117; ▪ 0.7 mBGL for TP118; ▪ 0.9 mBGL for TP119; and ▪ 1.0 mBGL for TP120.
Soil Logging	Excavated soils were classified in the field with respect to lithological characteristics and evaluated on a qualitative basis for odour and visual signs of contamination. Soil classifications and descriptions were based on Unified Soil Classification System (USCS) and Australian Standard (AS) 4482.1-2005. Test pit logs are presented in **Appendix G**.
Soil Sampling	▪ Soil samples were collected using a dry grab method (unused, dedicated nitrile gloves) & placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars. ▪ Blind field duplicates was separated from the primary samples and placed into glass jars. ▪ A small amount of duplicate was collected from each soil samples and placed into zip-lock bag for Photo-ionisation Detector (PID) screening. ▪ A small amount of duplicate was separated from all fill samples and placed into a zip-lock bag for asbestos analysis.
Decontamination Procedures	Nitrile sampling gloves were replaced between each sampling location. Any tools used for sampling purposes (i.e. trowel) were cleaned by hand followed by rinsing with Decon 90 solution and any remaining residual material was removed by rinsing with potable water. Samples collected from the excavator bucket were collected from parts of the bucket that had not come into contact with other soil to ensure no cross-contamination occurred.

Activity/Item	Details
Sample Preservation	Samples were stored in a refrigerated (ice-filled) chest, whilst on-site and in transit to the laboratory. All samples were submitted and analysed within the required holding period, as documented in laboratory reports discussed in a later section.
Management of Exhumed Soil	Exhumed soil was used as backfill for completed test pits.
Quality Control & Laboratory Analysis	A number of soil samples were submitted for analysis of previously-identified COPC by Eurofins Pty Ltd (Eurofins). QA/QC testing comprised intra-laboratory duplicates ('field duplicates') tested blind by Eurofins and an inter-laboratory field duplicate tested blind by Envirolab Services (Envirolab). All samples were transported under strict Chain-of-Custody (COC) conditions and COC certificates and laboratory sample receipt documentation were provided to EI for confirmation purposes, as discussed in **Section 8** and attached in **Appendix G**.
Soil Vapour Screening	Screening for potential VOCs in collected soil samples was conducted using a pre-calibrated Photo-ionisation Detector (PID).

8. Data Quality Assessment

The assessment of data quality is defined as the scientific and statistical evaluation of environmental data to determine if the data meets the objectives for the project (USEPA 2006). Data quality assessment included an evaluation of the compliance of the field sampling, field and laboratory duplicates and laboratory analytical procedures and an assessment of the accuracy and precision of these data from the laboratory quality control measurements. The findings of the data quality assessment in relation to the current investigation at the site are discussed in detail in **Appendix J**.

The QC measures generated from the field sampling and laboratory analytical program are summarised in **Table 8-1**:

Table 8-1 Quality Control Process

Data Quality	Control	Conformance [Yes, Part, No]	Report Sections
Preliminaries	Data Quality Objectives established	Yes	See DQO/DQI
Field work	Suitable documentation of fieldwork observations including borehole logs, sample register, field notes, calibration forms	Yes	See Appendices
Sampling Plan	Use of relevant and appropriate sampling plan (density, type, and location)	Yes	See sample rationale
	All media sampled and duplicates collected	Yes	Groundwater and Soil vapour not required
	Use of approved and appropriate sampling methods (soil, groundwater, air quality)	Yes	See methodology
	Selection of soil samples according to field PID readings (where VOCs are present)	Yes	See methodology
	Preservation and storage of samples upon collection and during transport to the laboratory	Yes	See methodology
	Appropriate Rinsate, Field and Trip Blanks taken	Yes	See laboratory reports
	Completed field and analytical laboratory sample COC procedures and documentation	Yes	See laboratory reports
Laboratory	Sample holding times within acceptable limits	Yes	See laboratory QA
	Use of appropriate analytical procedures and NATA-accredited laboratories	Yes	See laboratory report
	LOR/PQL low enough to meet adopted criteria	Yes	See laboratory appendix
	Laboratory blanks	Yes	See laboratory QA/QC
	Laboratory duplicates	Yes	See laboratory QA/QC

Data Quality	Control	Conformance [Yes, Part, No]	Report Sections
	Matrix spike/matrix spike duplicates (MS/MSDs)	Yes	See laboratory QA/QC
	Surrogates (or System Monitoring Compounds)	Yes	See laboratory QA/QC
	Analytical results for replicated samples, including field and laboratory duplicates and inter-laboratory duplicates, expressed as Relative Percentage Difference (RPD)	Yes	See Table T2, Appendix J
	Checking for the occurrence of apparently unusual or anomalous results, e.g. laboratory results that appear to be inconsistent with field observations or measurements	Yes	See Appendix K
Reporting	Report reviewed by senior staff to assess project meets desired quality, EPA guidelines and project outcomes.	Yes	See document control

8.1 Quality Overview

On the basis of the field and analytical data validation procedure employed, the overall quality of the analytical data produced for the site was considered to be of an acceptable standard for interpretive use and preparation of a conceptual site model (CSM).

9. Results

9.1 Soil Investigation Results

9.1.1 Site Geology and Subsurface Conditions

The general geology of the entire site encountered during test pitting may be described as a shallow layer of top soil, sandy gravelly clay filling, overlying clays and Bombo Latite bedrock. The geological information obtained during the investigation is summarised in **Table 9-1** and test pit logs from these works are presented in **Appendix G**.

Table 9-1 Generalised Subsurface Profile

Layer	Description	Depth to top & bottom of layer (mBGL)
		TP101 – TP120
Top soil	Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, trace roots, moist, no odour.	0.0 – 0.2
Fill	Gravelly SAND; medium to coarse grained, grey to dark grey, sub-angular to angular, medium to coarse, with low to medium plastic clays, with bitumen fragments, with sub-angular to angular latite gravels, moist, no odour.	0.2 – 0.4
	Gravelly CLAY; low plasticity, brown to dark grey, with latite gravels, with minor brick fragments, moist, no odour.	0.4 – 1.1
	Sandy CLAY; medium to high plasticity, light grey/green with mottled orange, fine to medium grained, moist, no odour. At TP107 the colour was a purple/grey and trace root fibres were evident.	0.0 – 0.9
	CLAY; low to medium plasticity, orange brown mottled red, with minor fine to medium grained sand, with minor latite gravels, moist, no odour.	1.3 – 1. 7
	CLAY; medium to high plasticity, brown mottled red and light grey, sub-angular to sub-rounded, fine to medium pebble sized gravels, moist to wet, no odour.	0.3 – 1.0
	Sandy CLAY; low plasticity, reddish/purple, with large angular terracotta, concrete, brick and granite tile fragments, moist, no odour.	1.7 – 2.0+
	GRAVEL; sub-angular to angular, medium to coarse road base gravels, dark grey, dry, no odour.	0.2 – 0.3
	Silty CLAY; low plasticity, orange brown, with fine to medium grained sand, with trace roots, moist, no odour.	0.0 – 0.5
	Silty CLAY; low plasticity, brown to dark brown, with sub-angular to angular, medium to coarse gravels, with fine to medium grained sand, with large terracotta, brick and granite tile fragments, with large sub-angular to angular, medium to coarse sandstone and latite fragments, dry to moist, no odour.	0.0 – 0.6

Layer	Description	Depth to top & bottom of layer (mBGL)
Natural	SAND; medium to coarse grained, yellow brown, with latite gravels, moist, no odour.	0.4 – 0.5+
	Silty CLAY; medium plasticity, dark brown, trace root fibres, moist, no odour.	0.2 – 0.4+
Bedrock	Latite; dark grey/ dark blue.	From 0.4+

+ Termination depth of borehole

9.1.2 Field Observations and PID Results

Soil samples were obtained from the test bores at various depths ranging between 0.0 m to 2.6 mBGL. All examined soil samples were evaluated on a qualitative basis for odour and visual signs of contamination (e.g. hydrocarbon odours, oil staining, petrochemical filming, asbestos fragments, ash, and charcoal) and the following observations were noted:

- Sub-angular to angular gravels were noted within some of the filling material;
- Trace root fibres were noted within some of the filling material;
- Building rubble, including concrete, brick, terracotta and granite tile fragments were evident in some of the filling material;
- Asphalt gravels were noted in the filling at test pit TP108;
- Fibre cement sheet fragments were not observed within exhumed soils at sampling locations;
- No charcoal, ash or slag was evident in any of the filling material;
- Minor sandstone and abundant latite fragments were noted within some of the filling material;
- Shallow latite bedrock was encountered mainly north of the dwelling, at less than 1 mBGL, whilst bedrock was deeper south of the dwelling;
- Visual or olfactory evidence of hydrocarbon impacts were not noted at any of the borehole locations investigated during this assessment; and
- VOC concentrations from collected soil samples were low, ranging from 0.1 and 3.3 parts per million (ppm). VOC concentrations were field-screened using a portable PID fitted with a 10.9 eV lamp. The PID results are shown in the test pit logs (**Appendix G**).

9.2 Laboratory Analytical Results

9.2.1 Soil Analytical Results

A summary of laboratory results showing test sample quantities, minimum/maximum analyte concentrations and samples found to exceed the SILs, is presented in **Table 9-2**. More detailed tabulations of results showing the tested concentrations for individual samples alongside the adopted soil criteria are presented in **Table T1** at the end of this report. Completed documentation used to track soil sample movements and laboratory receipt (i.e. COC and SRA forms) are copied in **Appendix I** and all laboratory analytical reports for tested soil samples are presented in **Appendix J**.

Table 9-2 Summary of Soil Analytical Results

No. of primary samples	Analyte	Min. Conc. (mg/kg)	Max. Conc. (mg/kg)	Sample locations exceeding investigation levels
Hydrocarbons				
40	F1	<20	<20	None
40	F2	<50	<50	None
40	F3	<100	<100	None
40	F4	<100	<100	None
40	Benzene	<0.1	<0.1	None
40	Toluene	<0.1	<0.1	None
40	Ethyl benzene	<0.1	<0.1	None
40	Total xylenes	<0.3	<0.3	None
PAHs				
40	Carcinogenic PAHs	<0.5	<0.5	None
40	Benzo(a)pyrene	<0.5	<0.5	None
40	Total PAHs	<0.5	0.5	None
40	Naphthalene	<0.5	<0.5	None
Heavy Metal				
40	Arsenic	<2	7	None
40	Cadmium	<0.4	<0.4	None
40	Chromium (Total)	<5	180	Sample TP107_1.8-1.9 exceeded HIL-A criteria
40	Copper	12	260	None
40	Lead	<5	52	None
40	Mercury	<0.1	0.1	None
40	Nickel	<5	150	Sample TP120_0.6-0.7 exceeded EIL criteria
40	Zinc	29	110	None
OCPs				
40	Total OCPs	<0.1	<0.1	None
OPPs				
40	Total OPPs	<2	<2	None
PCBs				
40	Total PCBs	<0.1	<0.1	None
Asbestos				

No. of primary samples	Analyte	Min. Conc. (mg/kg)	Max. Conc. (mg/kg)	Sample locations exceeding investigation levels
40	Asbestos	No asbestos detected	No asbestos detected	None

Heavy Metals

As shown in **Table T1**, all heavy metals (HM) concentrations were below the corresponding NEPM 2013 health-based HIL-A levels and were additionally below the corresponding adopted ecological investigation levels (EILs), with the following exceptions:

- Sample TP107_1.8-1.9 exceeded the HIL-A criteria for chromium with a concentration of 180 mg/kg; and
- Sample TP120_0.6-0.7 exceeded the EIL criteria for nickel with a concentration of 150 mg/kg.

TRHs

As shown in **Table T1**, total recoverable hydrocarbons (TRH) concentrations were below corresponding NEPM 2013 health-based HSL-A & B screening levels, which were the adopted SILs for TRHs. Concentrations were also below NEPM 2013 adopted ecological screening levels (ESLs).

BTEX and Naphthalene

As shown in **Table T1**, all BTEX and naphthalene concentrations were below the corresponding NEPM 2013 health-based HSL-A&B criteria.

PAHs

As shown in **Table T1**, all PAHs concentrations were below the corresponding NEPM 2013 health-based HIL-A levels and ecological-based EILs.

OCPs, OPPs and PCBs

As shown in **Table T1**, all OCPs, OPPs and PCBs concentrations were below the corresponding NEPM 2013 health-based HIL-A levels.

Asbestos

As shown in **Table T1**, detectable asbestos concentrations or traces of respirable fibres were not reported in analysed soil samples.

10. Site Characterisation

10.1 Soil Quality

With reference to **Table 9-2** and **Table T1**, concentrations of heavy metals, PAH, TRH, BTEX, pesticides and PCB's were all below the adopted SIL criteria for the site.

However, based on the laboratory results outlined in **Table T1**, the following observations were noted:

- TP120_0.6-0.7 exceeded the ecological investigation level (EIL) for nickel. However, based on the proposed development plans, the test pit is located in the vicinity of the proposed car park. As such, soil in this area will be capped with asphalt or concrete hardstand. Hence, based on the most conservative health investigation level (HIL-A), the material is suitable to remain onsite;
- Several test pits within the proposed landscaped area (particularly west of the dwelling) exceeded generic EIL criteria for copper. However, the pH of the soil from the site was analysed to be quite alkaline at 7.8. As such, site specific EIL criteria was able to be determined for copper and zinc; and
- TP107_1.8-1.9 exceeded the HIL-A criteria for chromium (VI), however this elevated chromium concentrations reported in soils is likely to be inherently related to the intermediary - mafic mineralogical composition of the latite geology which underlies the site. Furthermore, a 95% UCL chromium concentration (derived from all samples) of 40.2 mg/kg indicates that chromium concentrations across the investigation area are acceptable for the intended land use.

Asbestos was not identified within the fill material across the site during the investigation. However, the presence of asbestos in fill material must still be considered as a low risk onsite, particularly beneath the building footprints or within the centre of the site, where potentially uncontrolled demolition of the original building occurred.

10.2 Review of Conceptual Site Model

Based on investigation findings, the CSM discussed in **Section 5** was considered to appropriately identify contamination sources, migration mechanisms and exposure pathways, as well as potential onsite and offsite receptors. Data gaps identified in **Section 5.6** have largely been addressed by the characterisation of soil within the investigation area; however, the quality of soils in the following locations could not be established:

- Areas beneath the office building footprint.

Soil quality established from the investigation indicates generally consistent low COPC soil concentrations across the majority of the site, with those concentrations also at levels below the conservatively adopted HIL-A criteria. Given that the development proposal includes the retention of the existing slab-on-grade following the demolition of the existing site structures, soil access will remain restricted, and the risks posed to end users is expected to be low.

Review of the CSM is be undertaken should any changes to the scope of the development works be required.

11. Conclusions

The site located at 71 Fig Hill Lane, Dunmore NSW was the subject of an Additional Site Investigation (ASI) that was completed in order to assess and determine the nature and degree of onsite contamination associated with current and former uses of the site. EI understand that this assessment is required as part of a Development Application (DA) to be submitted to Shellharbour City Council. Based on the findings of this assessment it was concluded that:

- The site is currently occupied by a large two-storey abandoned and unfinished residential building. The building is surrounded by overgrown grasses and vegetation, gravel and concrete surfaces and large amounts of building rubble;
- Based on an historical aerial photograph review the site was a vacant block of grassed land with vegetation (potentially farmland), until it was cleared some time prior to 2004. By 2009 a large residential dwelling with associated sheds had been constructed. The site was occupied by this structure at present day;
- A site walkover inspection (undertaken by EI on 24 July 2019) indicated:
  - Underground services were evident beneath the ground surface, however they were not connected to property;
  - The property was surrounded by overgrown vegetation (including shrubs, bushes small trees and grasses). All vegetation was generally in good, healthy conditions with the overgrown grasses approximately 0.5 m high;
  - All structures on the site had been covered in graffiti;
  - The concrete hardstand evident adjacent the southern site boundary was in good conditions with no cracking/deformation evident;
  - Underlying the abandoned mansion was a series of underground tunnels leading to a potential basement carpark in the northern part of the site;
  - Building rubble (including terracotta, granite tile and brick fragments) was evident everywhere surrounding the property, including several piles of excess building waste; and
  - Burnt car remnants were evident adjacent the cliff (southern site boundary), whilst burnt building rubble remnants were evident west of the property.
- The sub-surface profile consisted of thin layer of topsoil, sandy gravelly clay, overlying sandy clay and bumbo latite bedrock (Bombo region);
- All tested analytes for the soil samples collected from testpits TP101 to TP120, were below the adopted health investigation and screening levels (HIL/HSL) and the adopted ecological investigation and screening levels (EIL/ESL); and
- Review of the Conceptual Site Model (CSM) developed as part of this ASI concluded that the model remained valid for the proposed development. While some data gaps were identified during the investigation, it was considered that the probable risk of contamination being at the site is low.

Based on the findings of this report, conducted in accordance with the investigation scope agreed with the Client and with consideration of the Statement of Limitations (**Section 13**), EI conclude that widespread contamination was not identified during this investigation that would likely constrain the proposed development. As such, soil is considered to be of suitable quality for the proposed use. Recommendations to ensure the suitability of the site is maintained during redevelopment are provided in **Section 12**.

12. Recommendations

Based on the findings of this investigation, the following recommendations are provided:

- Prior to the demolition of the existing building, a Hazardous Materials Survey will need to be completed to determine the extent and type of potentially hazardous building products that may be released to the environment during demolition and removal;
- Should hazardous materials be found in the existing buildings, following demolition an asbestos clearance should be undertaken in the vicinity of the building footprints by a visual inspection / walkover, to ensure that all hazardous materials (if any are confirmed present) have been removed adequately during demolition and the ground surface is free of residual contamination;
- During site redevelopment, the following may need to be undertaken:
  - Any material being removed from the site (including virgin excavated natural materials (VENM)) should be classified for off-site disposal in accordance with the EPA (2014) Waste Classification Guidelines;
  - Any material being imported to the site should be assessed for potential contamination in accordance with the EPA guidelines as being suitable for the intended use or be classified as VENM; and
  - Should unexpected finds (contamination) be encountered during works a qualified environmental consultant should be engaged to inspect the finds and offer the appropriate environmental/ waste guidance.

13. Statement of Limitations

The findings presented in this report are the result of discrete and specific sampling methodologies used in accordance with best industry practices and standards. Due to the site-specific nature of soil sampling from point locations, it is considered likely that all variations in subsurface conditions across a site cannot be fully defined, no matter how comprehensive the field investigation program.

While normal assessments of data reliability have been made, EI assumes no responsibility or liability for errors in any data obtained from previous assessments conducted on site, regulatory agencies (e.g. Council, EPA), statements from sources outside of EI, or developments resulting from situations outside the scope of works of this project.

Despite all reasonable care and diligence, the ground conditions encountered and concentrations of contaminants measured may not be representative of conditions between the locations sampled and investigated. In addition, site characteristics may change at any time in response to variations in natural conditions, chemical reactions and other events, e.g. groundwater movement and or spillages of contaminating substances. These changes may occur subsequent to EI's investigations and assessment.

EI's assessment is necessarily based upon the result of the site investigation and the restricted program of surface and subsurface sampling, screening and chemical testing which was set out in the proposal. Neither EI, nor any other reputable consultant, can provide unqualified warranties nor does EI assume any liability for site conditions not observed or accessible during the time of the investigations.

This report was prepared for the above named client and no responsibility is accepted for use of any part of this report in any other context or for any other purpose or by other third parties. This report does not purport to provide legal advice.

This report and associated documents remain the property of EI subject to payment of all fees due for this assessment. The report shall not be reproduced except in full and with prior written permission by EI.

References

Australian Standard (2005) Table E1 – Minimum sampling points required for site characterisation, in Guide to the investigation and sampling of sites with potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds, Standards Australia, AS 4482.1-2005, p45.

DMR (1974) Kiama 1:50,000 Geological Series Sheet 9028-1 (Edition 1) Geological Survey of New South Wales, Department of Mineral Resources.

EPA (1995) Sampling Design Guidelines Environment Protection Authority of New South Wales, Contaminated Sites Unit, EPA 95/59, September 1995.

EPA (2015) Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997, NSW EPA, Doc. EPA 2015/0164, September 2015.

EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd Edition), NSW EPA, Doc. EPA 2017P0269, October 2017.

Hazelton, P. A. (1992). Soil Landscapes of the Kiama 1:100,000 Sheet, Department of Conservation and Land Management (incorporating the Soil Conservation Service of NSW), Sydney, 1992.

Martens Consulting Engineers (2019a) Preliminary Acid Sulfate Soils Assessment: Proposed Eco Tourist Facility – 71 Fig Hill Lane, Dunmore NSW (Ref. P1907197JR02V01, dated 18 June 2019).

Martens Consulting Engineers (2019b), Preliminary Geotechnical Assessment: Proposed Eco Tourist Facility – 71 Fig Hill Lane, Dunmore NSW (Ref P1907197JR01v01, dated 28 June 2019).

Naylor SD, Chapman GA, Atkinson G, Murphy CL, Tulau MJ, Flewin TC, Milford HB and Morand DT (1998) Guidelines for the Use of Acid Sulfate Soil Risk Maps, Department of Land and Water Conservation, Sydney, Second Edition.

NEPM (2013) Schedule B1 Guideline on Investigation Levels for Soil and Groundwater, Schedule B2 Guideline on Site Characterisation and Schedule B4 Guideline on site-specific health risk assessments, National Environmental Protection (Assessment of Site Contamination) Measure 1999, National Environmental Protection Council, December 1999, Amendment 2013.

OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites, NSW Office of Environment and Heritage (OEH), OEH 2011/0650, 23 p.

Shellharbour Development Control Plan 2013.

Shellharbour Local Environmental Plan 2013.

Tulau, M. J. (1997) Acid Sulfate Soil Risk of the Albion Park Sheet 9028-N1 Department of Land and Water Conservation, Sydney, Second Edition. Supplied by the Sydney South Coast, Geographical Information Systems Unit.

US EPA (2006) Data Quality Assessment: A Reviewers Guide – EPA QA/G-9R. USEPA Office of Environmental Information, EPA/240/B-06/002, February 2006.

WADOH (2009) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia. Published by the Western Australian Department of Health, May 2009.

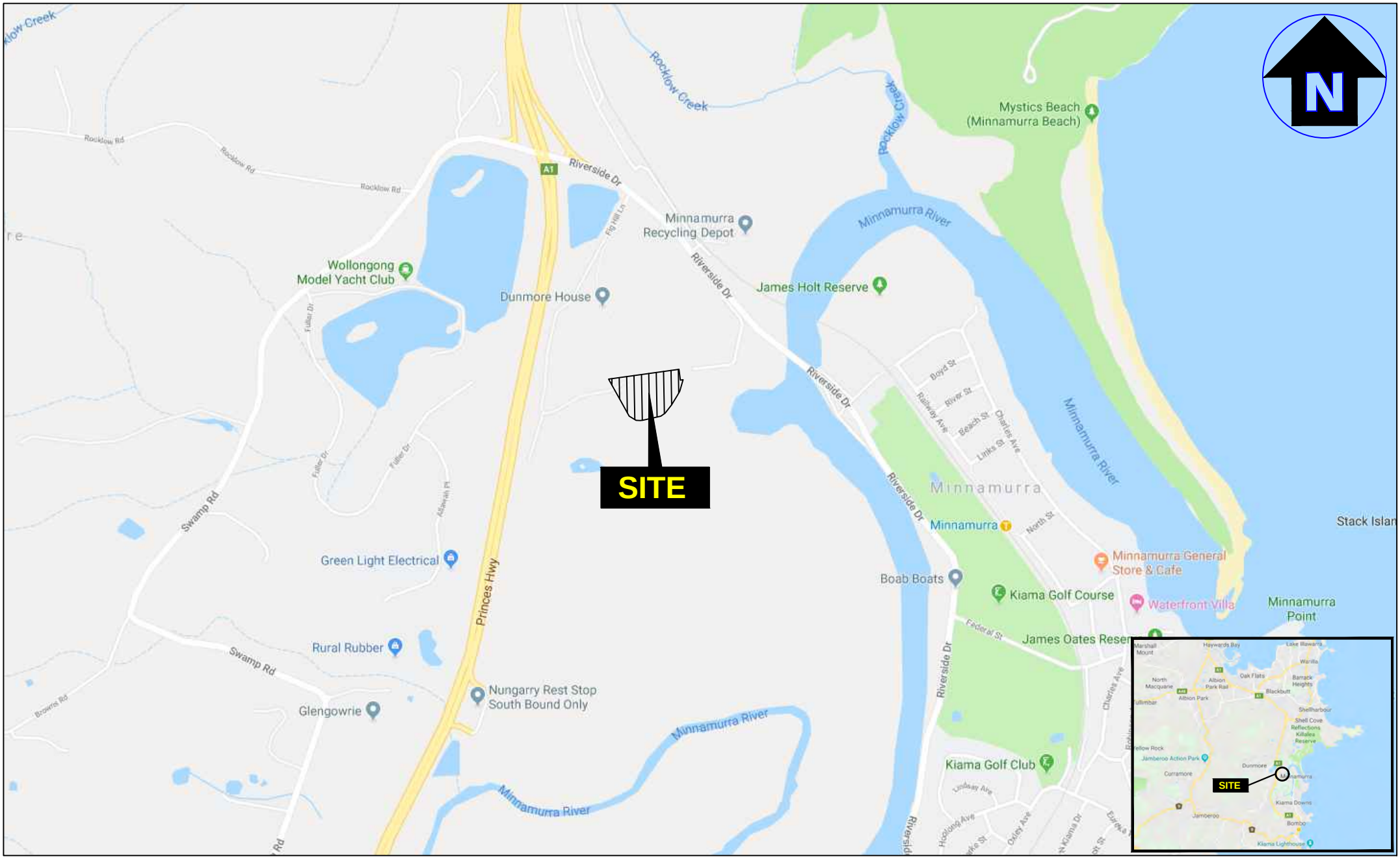
Abbreviations

ACM	Asbestos-containing materials
ASI	Additional Site Investigation
ASS	Acid sulfate soils
B(a)P	Benzo(a)pyrene (a PAH compound), - B(a)P TEQ Toxicity Equivalent Quotient
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
COC	Chain of Custody
DEC	Department of Environment and Conservation, NSW (see OEH)
DECC	Department of Environment and Climate Change, NSW (see OEH)
DECCW	Department of Environment, Climate Change and Water, NSW (see OEH)
DA	Development Application
DP	Deposited Plan
EPA	Environment Protection Authority NSW
F1	TRH C_6 – C_{10} less the sum of BTEX concentrations (Ref. NEPM 2013, Schedule B1)
F2	TRH >C_{10} – C_{16} less the concentration of naphthalene (Ref. NEPM 2013, Schedule B1)
HIL	Health-based Investigation Level
HSL	Health-based Screening Level
km	Kilometres
EIL	Ecological Investigation Level
ESL	Ecological Screening Level
m	Metres
mAHD	Metres Australian Height Datum
mBGL	Metres Below Ground Level
NATA	National Association of Testing Authorities, Australia
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NSW	New South Wales
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage, NSW (formerly DEC, DECC, DECCW)
OPP	Organophosphourous Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PQL	Practical Quantitation Limit (limit of detection for respective laboratory instruments)
QA/QC	Quality Assurance / Quality Control
SCC	Specific Contaminant Concentration
SRA	Sample receipt advice (document confirming laboratory receipt of samples)
TP	Test pit
TPH	Total Petroleum Hydrocarbons (superseded term equivalent to TRH)
TRH	Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)
UCL	Upper Confidence Limit of the mean
US EPA	United States Environmental Protection Agency
UPSS	Underground Petroleum Storage System
UST	Underground Storage Tank

Appendix A - Figures

A.1 Figure 1 – Site Location Plan

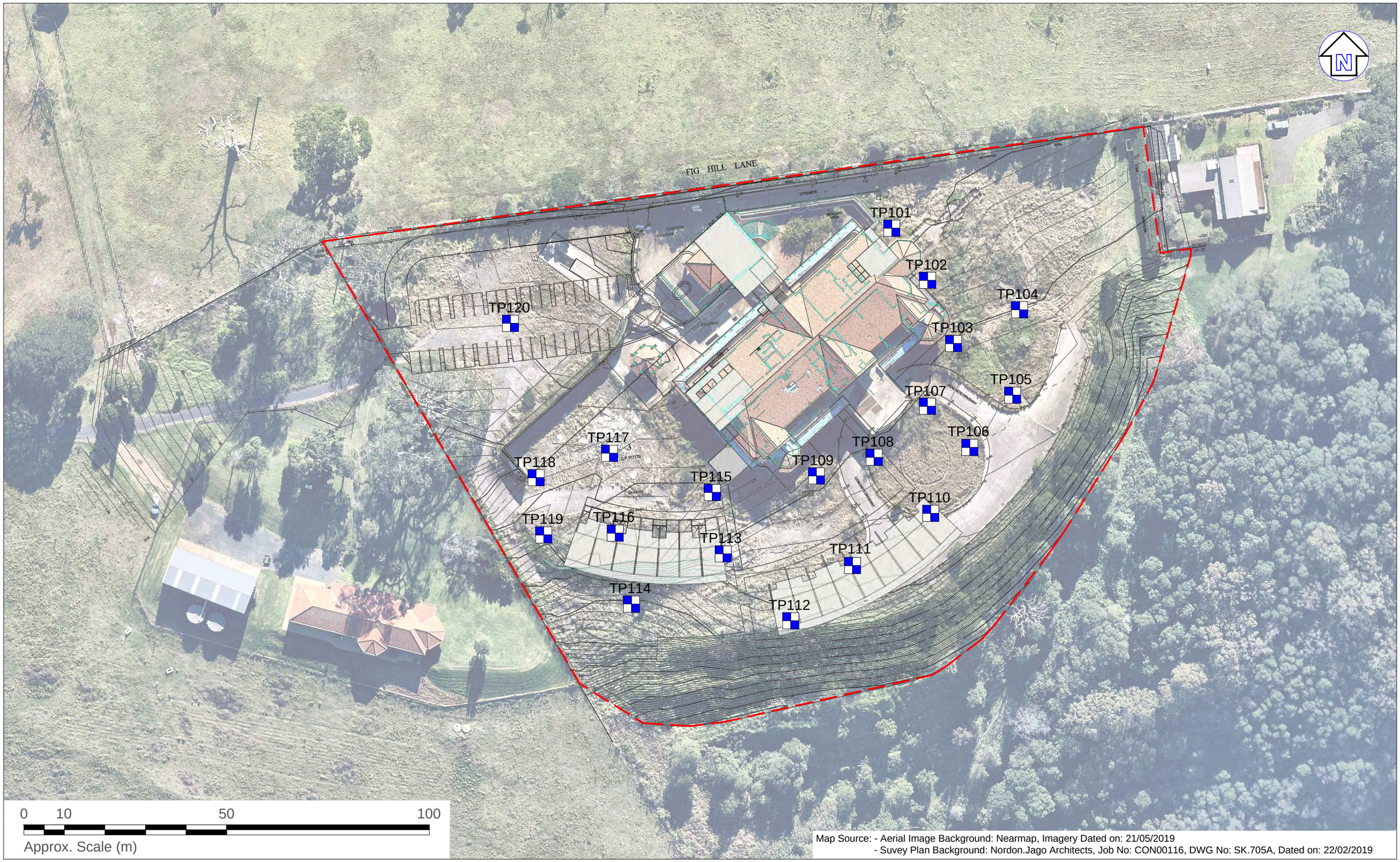
A.2 Figure 2 – Sampling Location Plan



eiaustralia Contamination | Remediation | Geotechnical Suite 6.01, 55 Miller Street, PYRMONT 2009 Ph (02) 9516 0722 Fax (02) 9518 5088	Drawn:	M.G.	**Nordon Jago Architects** Additional Site Investigation 71 Fig Hill Lane, Dunmore NSW Site Locality Plan
	Approved:	C.M.	
	Date:	20-09-19	
	Scale:	Not To Scale	

Figure: 1

Project: E24306.E03



Map Source: - Aerial Image Background: Nearmap, Imagery Dated on: 21/05/2019
- Suvey Plan Background: Nordon.Jago Architects, Job No: CON00116, DWG No: SK.705A, Dated on: 22/02/2019

LEGEND

- Approximate site boundary
- Approximate test pit location

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Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street, PYRMONT 2009
Ph (02) 9516 0722 Fax (02) 9518 5088

Drawn:	C.M.
Approved:	N.F.
Date:	02-08-19

Nordon Jago Architects Pty Ltd
Additional Site Investigation
71 Fig Hill Lane, Dunmore NSW
Sampling Location Plan

Figure: 2

Project: E24306.E03

Appendix B - Tables

B.1 Table T1 – Summary of Soil Analytical Results

Table T1 - Summary of Soil Analytical Results **E24306 - Dunmore**

Sample ID	Material	Date	Heavy Metals								PAHs				BTEX				TPH		TRH				Pesticides		PCBs	Asbestos
			As	Cd	Cr VI	Cu	Pb	Hg	Ni	Zn	Carcinogenic PAHs (as B(a)P TEQ)	Benzo(a)pyrene	Total PAHs	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	C6-C9	C10-C36	F1	F2	F3	F4	OCPs	OPPs	Total	Presence / absence
EI Australia, 2019																												
TP101_0.1-0.2			4.4	< 0.4	40	40	35	< 0.1	12	70	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP101_0.4-0.5			< 2	< 0.4	14	91	7.6	< 0.1	7.8	47	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP102_0.1-0.2			4.2	< 0.4	23	22	33	< 0.1	13	72	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP102_0.3-0.4			5.4	< 0.4	24	26	52	< 0.1	12	71	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP103_0.1-0.2			5.2	< 0.4	91	29	35	< 0.1	13	79	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP103_0.4-0.5			4.8	< 0.4	26	28	33	< 0.1	15	69	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP104_0.1-0.2			5.4	< 0.4	30	29	43	< 0.1	14	110	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP104_0.5-0.6			3	< 0.4	14	64	26	< 0.1	8.1	62	< 0.5	< 0.5	0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP105_0.1-0.2			4.9	< 0.4	28	16	25	< 0.1	12	48	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP105_0.5-0.6			3.4	< 0.4	27	48	16	< 0.1	11	56	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP106_0.5-0.6			5.4	< 0.4	18	12	6.4	< 0.1	< 5	29	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP106_0.7-0.8			2	< 0.4	15	100	10	< 0.1	7.6	56	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP107_1.0-1.1			< 2	< 0.4	10	200	< 5	< 0.1	5.8	50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP107_1.8-1.9			2.5	< 0.4	180	100	12	< 0.1	11	84	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP108_0.3-0.4			2.9	< 0.4	16	120	21	< 0.1	8.2	68	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP108_0.5-0.6			3.1	< 0.4	19	38	21	< 0.1	9.4	57	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP109_0.1-0.2			< 2	< 0.4	44	160	7.6	< 0.1	8.1	64	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP109_0.6-0.7			< 2	< 0.4	6.6	200	18	< 0.1	8.6	54	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP110_0.2-0.3			2.8	< 0.4	81	70	13	< 0.1	12	71	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP110_0.9-1.0			7	< 0.4	16	33	9.6	< 0.1	< 5	35	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP111_0.1-0.2	Fill	24/7/2019	2.5	< 0.4	54	97	12	< 0.1	10	57	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP111_0.6-0.7			< 2	< 0.4	31	150	13	< 0.1	8.9	58	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP112_0.1-0.2			3.8	< 0.4	30	32	15	< 0.1	13	39	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP112_0.5-0.6			3	< 0.4	19	54	32	< 0.1	9.5	110	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP113_0.2-0.3			2.3	< 0.4	32	95	13	< 0.1	10	60	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP113_1.2-1.3			< 2	< 0.4	73	91	8.1	< 0.1	9.9	38	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP114_0.1-0.2			2.9	< 0.4	22	110	15	< 0.1	11	69	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP114_0.5-0.6			2.6	< 0.4	22	54	13	< 0.1	9.3	60	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP115_0.1-0.2			3.3	< 0.4	32	79	11	< 0.1	13	63	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP115_1.1-1.2			< 2	< 0.4	8.9	120	21	< 0.1	9.2	50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP116_0.0-0.1			< 2	< 0.4	28	150	7.4	< 0.1	8.3	60	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP116_0.6-0.7			< 2	< 0.4	18	170	16	< 0.1	17	62	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP117_0.3-0.4			< 2	< 0.4	7.6	160	17	< 0.1	11	61	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP117_0.8-0.9			< 2	< 0.4	< 5	110	17	< 0.1	13	57	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP118_0.1-0.2			< 2	< 0.4	18	230	7.3	< 0.1	9.6	60	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP118_0.5-0.6			< 2	< 0.4	< 5	220	12	< 0.1	8.7	60	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP119_0.2-0.3			< 2	< 0.4	9.9	180	21	< 0.1	13	70	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP119_0.5-0.6			2.3	< 0.4	12	260	12	0.1	11	47	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP120_0.1-0.2			3.8	< 0.4	26	56	29	< 0.1	11	75	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
TP120_0.6-0.7			3	< 0.4	65	77	< 5	< 0.1	150	80	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
Statistical Analysis																												
Maximum Concentration			7	< 0.4	180	260	52	0.1	150	110	< 0.5	< 0.5	0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.3	< 20	< 50	< 20	< 50	< 100	< 100	< 0.1	< 2	< 0.1	No
Mean			3.6884615	NC	32.394737	98.025	18.842105	0.1	14.342105	62.2	NC	NC	0.5	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Standard Deviation			1.2694336	NC	31.72799	66.34428	10.879379	NC	22.719151	16.413253	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
95% UCL			NC	NC	40.2	115.7	NC	NC	29.19	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SILs																												
HIL A - Residential			100	20	100 Cr (VI)	6,000	300	40	400	7,400	3		300												240		1	
HSL A & B - Residential *			Source depths (0 m to <1 m BGL)												3	0.5	160	55	40		45	110						
			Source depths (1 m to <2 m BGL)												NL	0.5	220	NL	60		70	240						
			Source depths (2 m to <4 m BGL)												NL	0.5	310	NL	95		110	440						
			Source depths (4m +)												NL	0.5	540	NL	170		200	NL						
EILs / ESLs			100		198	580 **	1,200		35	305 **			0.7		170	50	85	70	105		180	120	300	2,800	180			
Management Limits – *Residential, parkland and public open space* Coarse grained soil texture[1]																					700	1,000	3,500	10,000				
Asbestos contamination																												0.01

Notes:

All results are recorded in mg/kg (unless otherwise stated)

Highlighted values indicates concentration exceeds Human Helath Based Soil Criteria

Highlighted values indicates concentration exceeds Ecological Soil Criteria

Highlighted indicates NEPM 2013 criteria exceeded

HIL A	NEPM 1999 Amendment 2013 'HIL A' Health Based Investigation Levels applicable for residential with garden/accessible soil, includes premises such as shops, offices, factories and industrial sites.
HSL A & B	NEPM 1999 Amendement 2013 'HSL A&B' Health Based Investigation Levels applicable for clow to high density residential.
NA	'Not Analysed' i.e. the sample was not analysed.
NC	Not Calculated'
ND	'Not detected' i.e. all concentrations of the compounds within the analyte group were found to be below the laboratory limits of detection.
NL	'Not Limiting' - The soil vapour limit exceeds the soil concentration at which the pore water phase cannot dissolve any more of the individual chemical.
NR	No current published criterion.
1	Coarse Grained soil values were applied, being the most conservative of the material types.
F1	To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fraction.
F2	To obtain F2 subtract Naphthalene from the >C10-C16 fraction.
F3	(>C16-C34)
F4	(>C34-C40)
*	Sand soil texture classification for screening levelsas a concervative approach, given the deeper impacted alluvial sand material.
**	The added contaminant limit (ACL) for copper and zinc were derived using site-specific pH.

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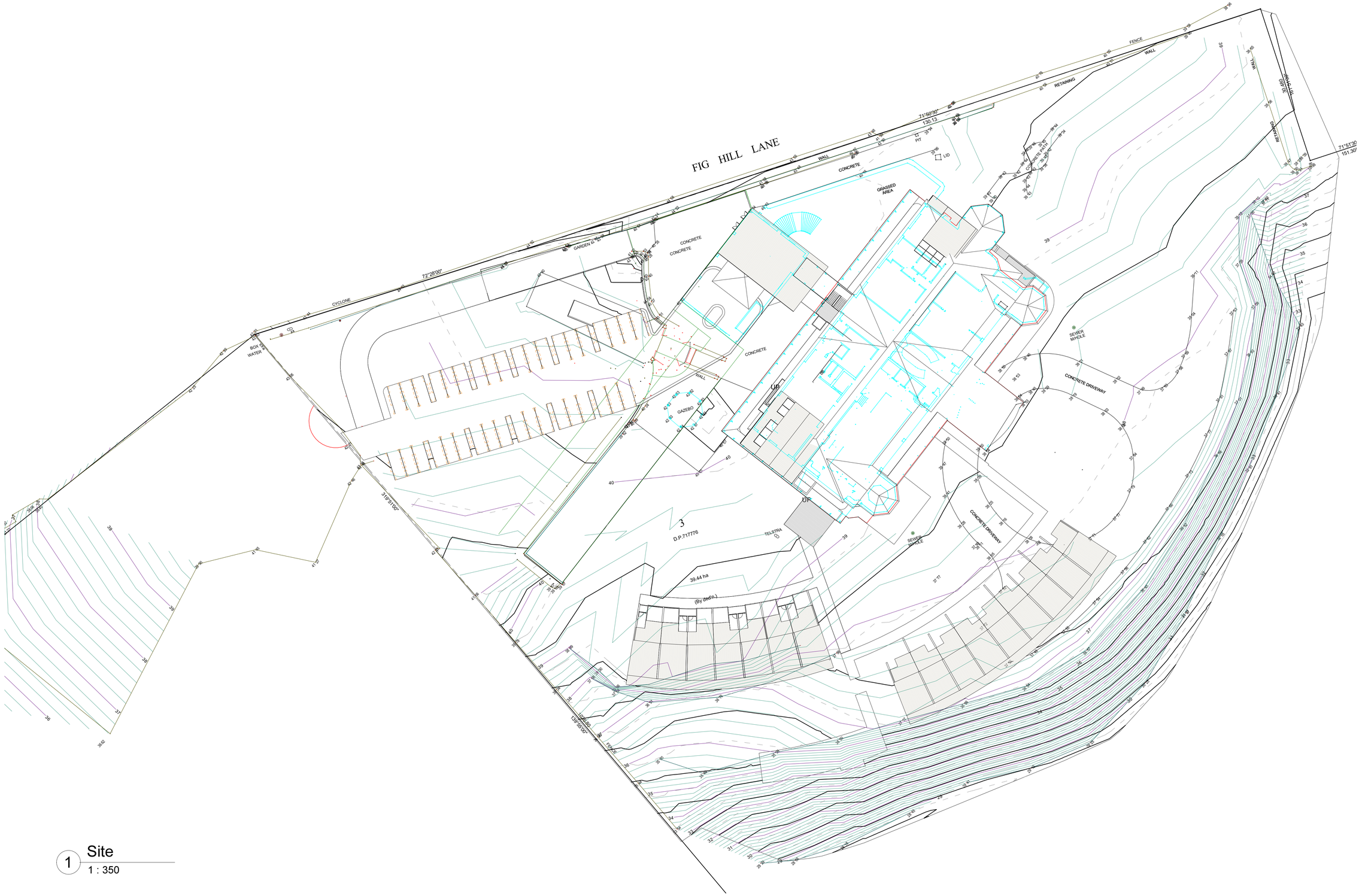
Contamination | Remediation | Geotechnical

Appendix C – Proposed Development Plans



1 Site
1 : 350

NORDON · JAGO ARCHITECTS

LEVEL 4, 111-117 DEVONSHIRE STREET, SURRY HILLS, NSW 2010 T.02 9318 8400 F.02 9318 8480
STEPHEN J. NORDON Registration No. NSW - 4704 GRAHAM P. JAGO Registration No. NSW - 4926

SKETCH PLANS

NOT For Construction

PRELIMINARY ISSUE

Rev	Description	Date
A	draft for Review	19.07.05

PROPOSED ECO - DEVELOPMENT . LOT 3 DP 71776 DUNMORE

H:\00. NJA Revit Template\CON00116_190625_extended version_snordon.rvt

TITLE

SURVEY OVERLAY

JOB No.	CON00116
DATE	22.02.2019
SCALE	A1 @ 1 : 350
DWG No.	SK.705 A

Appendix D - Water NSW Groundwater Bore Search

State Overview
State Overview

Rivers and Streams
favourites · search · download sites · find a site
Real Time Data - Rivers And Streams

Daily River Reports
Daily River Reports

Dams
favourites · search · download sites · find a site
Real Time Data - Major Dams

Groundwater (Telemetered data)
favourites · search · download sites · find a site
Real Time Data - Bores

All Groundwater Site details
search · download sites · find a site
All Groundwater Map

Meteorology
favourites · search · download sites · find a site
Real Time Data - Weather Stations

Hunter Integrated Telemetry System
Hunter Integrated Telemetry System

bandwidth high low

glossary and metadata

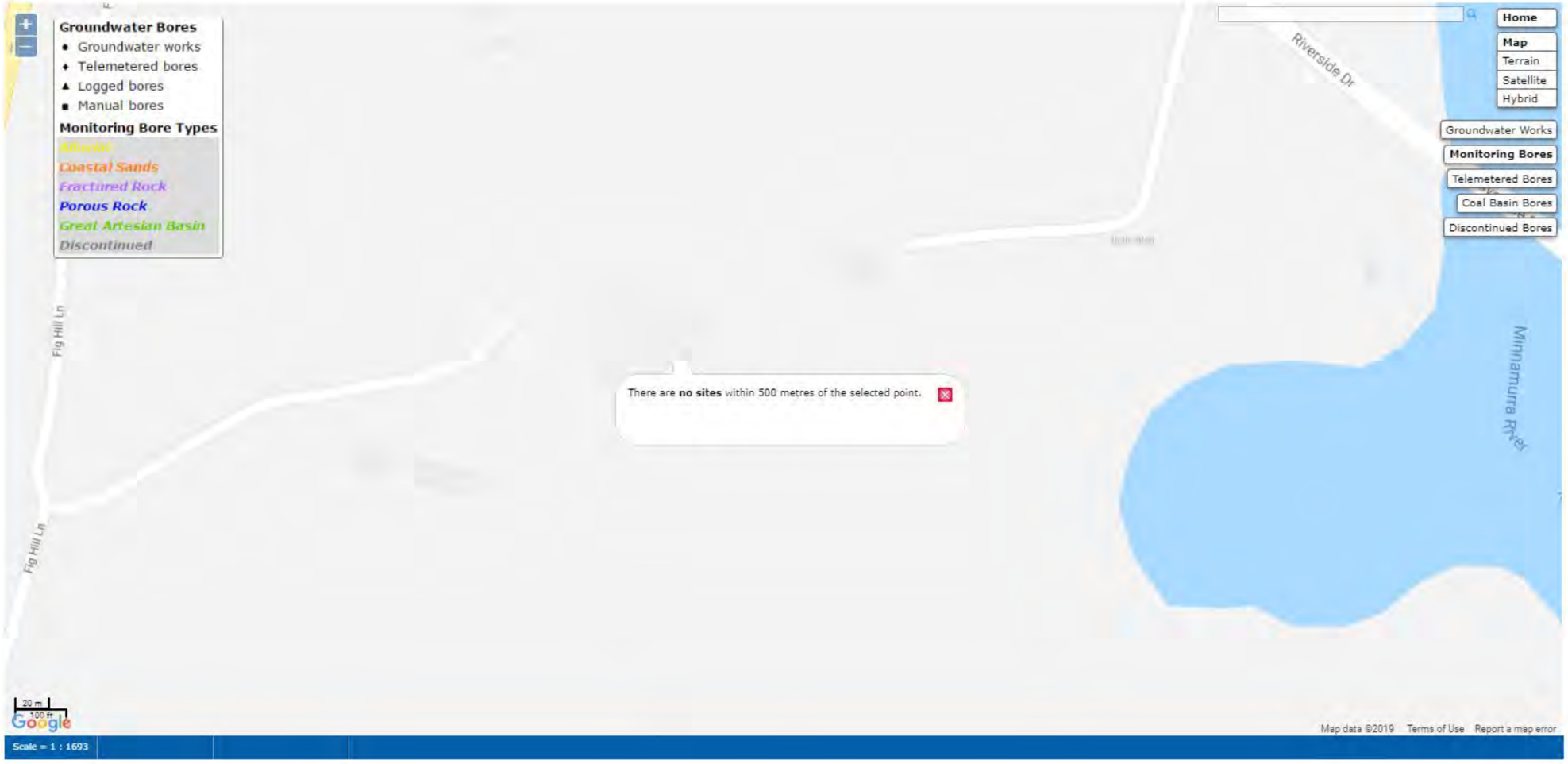
All Groundwater Site Details

All Groundwater Map

bookmark this page

All data times are Eastern Standard Time

Map | Info



Appendix E – Site Photographs

Photo 1: Eastern view of the dwelling and surrounding area (22 July 2019)

Photo 2: Burnt pile of building rubble west of the dwelling (22 July 2019)

Photo 3: Burnt pile of building rubble south-west of the dwelling (22 July 2019)

Photo 4: Pile of excess building materials south-west of the dwelling (22 July 2019)

Photo 5: Northern view of the dwelling (22 July 2019)

Photo 6: North-west view of the dwelling and surrounding vegetation (22 July 2019)

Photo 7: Eastern part of the dwelling (22 July 2019)

Photo 8: Internal part of the dwelling (22 July 2019)

Photo 9: North-eastern side of the dwelling (22 July 2019)

Photo 10: Western view in between dwelling and garage (22 July 2019)

Photo 11: Northern view of carpark/basement, north of the dwelling (22 July 2019)

Photo 12: Northern view of the dwelling (22 July 2019)

Photo 13: Southern view of the dwelling and associated structures (22 July 2019)

Photo 14: South-eastern view of the remainder of the site and Minnamurra River (24 July 2019)

Photo 15: Test pit TP101 (24 July 2019)

Photo 16: Latite and clay material sampled from test pit TP103 (24 July 2019)

Appendix F - Borehole Logs

TEST PIT: TP101

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0	0.20	TP101_0.1-0.2 QD1/ QT1 0.10-0.20 m PID = 1.3 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M	-	FILL
				0.40				-	FILL: Gravelly SAND; medium to coarse grained, dark grey-grey, with sub-angular to angular latite gravel, low to medium plasticity clay and bitumen, no odour.	M		
			0.5	0.50	TP101_0.4-0.5 ES PID = 1 ppm			-	FILL: SAND; medium to coarse grained, yellow, with sandstone gravel, no odour.	M		
									Hole Terminated at 0.50 m Refusal on LATITE bedrock.			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP102

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0	0.20	TP102_0.1-0.2 ES PID = 0.1 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M	-	FILL
				0.40	TP102_0.3-0.4 ES PID = 0.4 ppm			-	FILL: Silty CLAY; medium plasticity, dark brown, trace root fibres, no odour.	M		
			0.5						Hole Terminated at 0.40 m Refusal on LATITE bedrock.			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP103

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP103_0.1-0.2 ES PID = 0.7 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M	-	FILL
				0.40								
			0.5		TP103_0.4-0.5 ES PID = 0.3 ppm			-	FILL: Gravelly SAND; medium to coarse grained, dark grey-grey, with sub-angular to angular latite gravel, low to medium plasticity clay and bitumen, no odour.	M		
				0.60					Hole Terminated at 0.60 m Refusal on LATITE bedrock.			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP104

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP104_0.1-0.2 ES PID = 1.1 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.40								
			0.5		TP104_0.5-0.6 ES PID = 0.7 ppm			-	FILL: Gravelly CLAY; low plasticity, brown to dark grey, with dark grey-orange latite and sandstone gravel, with minor brick fragments, no odour.	M	-	
			1.0	1.00					Hole Terminated at 1.00 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP105

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP105_0.1-0.2 ES PID = 1 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M	-	FILL
				0.40								
			0.5		TP105_0.5-0.6 ES PID = 2.4 ppm			-	FILL: Gravelly CLAY; low plasticity, brown to dark grey, with dark grey-orange latite and sandstone gravel, with minor brick fragments, no odour.	M		
				0.70								
			1.0						Hole Terminated at 0.70 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP106

Project	Additional Site Investigation		
Location	71 Fig Hill Lane, Dunmore NSW	Sheet	1 OF 1
Position	Refer to Figure 2	Date	24/7/19
Job No.	E24306.E03	Logged	CM
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP106_0.05-0.1 ES PID = 1.9 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.40								
			0.5		TP106_0.5-0.6 ES PID = 0.7 ppm			-	FILL: Sandy CLAY; medium to high plasticity, light grey-green, mottled orange, fine to medium grained, no odour.	M	-	
				0.70								
					TP106_0.7-0.8 ES PID = 2.4 ppm			-	FILL: Gravelly CLAY; low plasticity, red-purple, with medium to coarse, sub-angular to angular, bitumen and latite gravel, with fine to medium grained sand, no odour.	M		
			1.0	*1.10*								
									Hole Terminated at 1.10 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

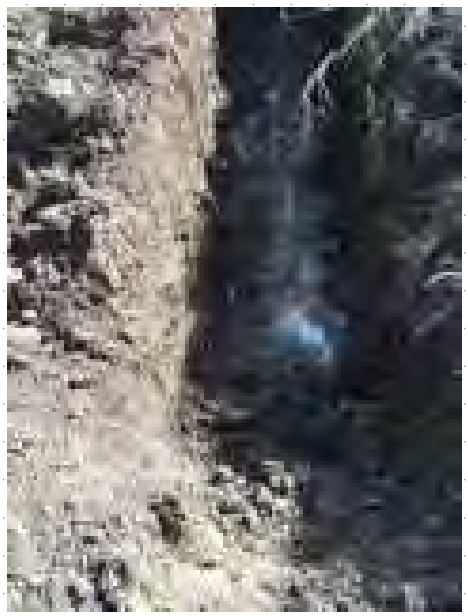
This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP107

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP107_0.2-0.3 ES PID = 2.1 ppm			-	FILL: Sandy CLAY; low plasticity, purple-grey, fine to medium grained, with medium to coarse, sub-angular to angular gravel, with trace root fibres, no odour.	M	-	FILL
			0.5									
				0.90				-	FILL: Gravelly SAND; medium to coarse grained, dark grey, gravel is medium to coarse, sub-angular to angular gravel, no odour.	M		
			1.0		TP107_1.0-1.1 ES PID = 2.6 ppm							
				1.30				-	FILL: CLAY; low to medium plasticity, orange, mottled red, with minor fine to medium grained sand and minor latite gravel, no odour.	M		
			1.5		TP107_1.3-1.4 ES PID = 3.3 ppm							
				1.70				-	FILL: Sandy CLAY; low plasticity, red-purple, with large, angular terracotta, concrete and brick fragments, no odour.	M		
				2.00	TP107_1.8-1.9 ES PID = 1.3 ppm							
			2.0						Hole Terminated at 2.00 m Refusal on LATITE bedrock.			
			2.5									
			3.0									

Sketch & Other Observations



This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP108

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0	0.20				-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.30	TP108_0.2-0.3 ES PID = 2.3 ppm			-	FILL: GRAVEL; medium to coarse, sub-angular to angular bitumen fragments, dark grey, no odour.	D		
			0.5		TP108_0.5-0.6 ES PID = 1.7 ppm			-	FILL: CLAY; medium to high plasticity, brown, mottled red-light grey, with minor fine to medium, sub-angular, pebble-sized gravel, no odour.	M - W	-	
			1.0	1.00					Hole Terminated at 1.00 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP109

Project	Additional Site Investigation		
Location	71 Fig Hill Lane, Dunmore NSW	Sheet	1 OF 1
Position	Refer to Figure 2	Date	24/7/19
Job No.	E24306.E03	Logged	CM
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP109_0.1-0.2 ES PID = 1.1 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.30				-	FILL: CLAY; medium to high plasticity, brown, mottled red-light grey, with minor fine to medium, sub-angular, pebble-sized gravel, no odour.		-	
			0.5		TP109_0.6-0.7 ES PID = 1.9 ppm					M		
			1.0	1.00					Hole Terminated at 1.00 m Target depth reached.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP110

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP110_0.2-0.3 ES PID = 2.1 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
			0.5	0.50	TP110_0.9-1.0 ES PID = 2.3 ppm			-	FILL: CLAY; medium to high plasticity, brown, mottled red-light grey, with minor fine to medium, sub-angular, pebble-sized gravel, no odour.	M	-	
			1.0	1.50					Hole Terminated at 1.50 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP111

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP111_0.1-0.2 ES PID = 2.8 ppm			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
			0.5	0.50	TP111_0.6-0.7 ES PID = 2.9 ppm			-	FILL: Gravelly CLAY; low plasticity, brown to dark grey, with dark grey-orange latite and sandstone gravel, with minor brick fragments, no odour.	M	-	
			1.0									
			1.5	1.50					Hole Terminated at 1.50 m Refusal on LATITE bedrock.			
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP112

Project	Additional Site Investigation		
Location	71 Fig Hill Lane, Dunmore NSW	Sheet	1 OF 1
Position	Refer to Figure 2	Date	24/7/19
Job No.	E24306.E03	Logged	CM
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP112_0.1-0.2 ES			-	TOPSOIL: Silty CLAY; low plasticity, orange-brown, with fine to medium grained sand, with trace roots, no odour.	M	-	TOPSOIL
			0.5	*0.50*	TP112_0.5-0.6 ES			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, medium to coarse grained, with medium to coarse, sub-angular to angular gravel, no odour.	M		FILL
				0.70					Hole Terminated at 0.70 m Refusal on LATITE bedrock.			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP113

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0					-	FILL: Silty CLAY; low plasticity, red-brown, with trace roots, no odour.	D - M		FILL
			0.5		TP113_0.2-0.3 ES							
			1.0	1.00				-	FILL: Sandy CLAY; low to medium plasticity, dark brown, medium to coarse grained, with medium to coarse, sub-angular to angular gravel, no odour.	M	-	
			1.5		TP113_1.2-1.3 ES							
			2.0	2.00				-	FILL: Sandy GRAVEL; medium to coarse, sub-angular to angular, dark grey-brown, with medium to coarse grained sand, no odour.	M - W		
			2.5		TP113_2.5-2.6 ES							
			3.0	3.00					Hole Terminated at 3.00 m Refusal due to extent of excavator arm.			

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP114

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP114_0.1-0.2 ES			-	FILL: Silty CLAY; low plasticity, brown-dark brown, with medium to coarse, sub-angular to angular gravel, with fine to medium grained sand, with large terracotta, brick and granite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, no odour.	D - M	-	FILL
			0.5	*0.60*	TP114_0.5-0.6 ES							
									Hole Terminated at 0.60 m Refusal on LATITE bedrock.			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

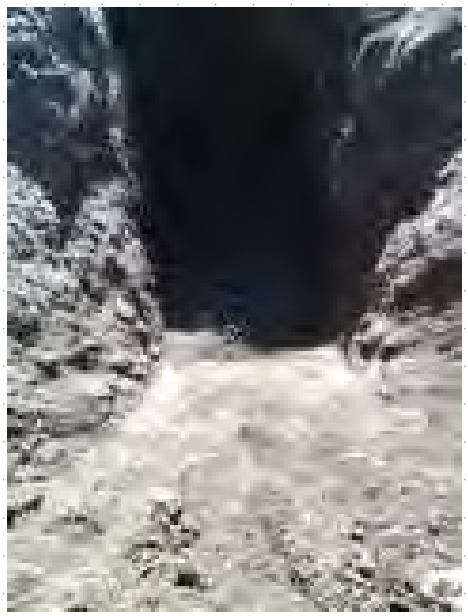
This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP115

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0					-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.20	TP115_0.1-0.2 ES			-	FILL: Silty CLAY; low plasticity, brown-dark brown, with medium to coarse, sub-angular to angular gravel, with fine to medium grained sand, with large terracotta, brick and granite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, no odour.	M	-	
			0.5									
			1.0		TP115_1.1-1.2 ES							
				1.30					Hole Terminated at 1.30 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations



This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP116

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP116_0.0-0.1 ES			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.20				-	FILL: Silty CLAY; low plasticity, brown-dark brown, with medium to coarse, sub-angular to angular gravel, with fine to medium grained sand, with large terracotta, brick and granite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, no odour.			
			0.5		TP116_0.6-0.7 ES					M	-	
			1.0									
			1.5	1.50					Hole Terminated at 1.50 m Refusal on LATITE bedrock.			
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP117

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0					-	FILL: Silty CLAY; low plasticity, brown-dark brown, with medium to coarse, sub-angular to angular gravel, with fine to medium grained sand, with large terracotta, brick and granite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, no odour.	M	-	FILL
			0.5		TP117_0.3-0.4 ES							
				0.70					From 0.7 m, with red-orange clay, mottled light grey, no odour.	M		
				1.00	TP117_0.8-0.9 ES							
			1.0						Hole Terminated at 1.00 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP118

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0	0.20	TP118_0.1-0.2 ES			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M	-	FILL
			0.5	0.70	TP118_0.5-0.6 ES			-	FILL: Silty CLAY; low plasticity, brown-dark brown, with medium to coarse, sub-angular to angular gravel, with fine to medium grained sand, with large terracotta, brick and granite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, no odour.	M		
			1.0						Hole Terminated at 0.70 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP119

Project	Additional Site Investigation	Sheet	1 OF 1
Location	71 Fig Hill Lane, Dunmore NSW	Date	24/7/19
Position	Refer to Figure 2	Logged	CM
Job No.	E24306.E03		
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP119_0.2-0.3 ES			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.40								
			0.5		TP119_0.5-0.6 ES			-	FILL: Silty CLAY; low plasticity, brown-dark brown, with medium to coarse, sub-angular to angular gravel, with fine to medium grained sand, with large terracotta, brick and granite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, no odour.	M	-	
				0.90								
			1.0						Hole Terminated at 0.90 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

No Photo

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

TEST PIT: TP120

Project	Additional Site Investigation		
Location	71 Fig Hill Lane, Dunmore NSW	Sheet	1 OF 1
Position	Refer to Figure 2	Date	24/7/19
Job No.	E24306.E03	Logged	CM
Client	Nordon Jago Architects	Machine	12t Excavator

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
E	-	GWNE	0.0		TP120_0.1-0.2 QD2/QT2			-	FILL: Sandy CLAY; low to medium plasticity, dark brown, fine to medium grained, with roots, no odour.	M		FILL
				0.30				-	FILL: Silty CLAY; low plasticity, brown-dark brown, with medium to coarse, sub-angular to angular gravel, with fine to medium grained sand, with large terracotta, brick and granite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, with medium to coarse, sub-angular to angular, large sandstone and latite fragments, no odour.	M	-	
			0.5		TP120_0.6-0.7 ES							
			1.0	1.00					Hole Terminated at 1.00 m Refusal on LATITE bedrock.			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

EXPLANATION OF NOTES, ABBREVIATIONS & TERMS USED ON BOREHOLE AND TEST PIT LOGS

DRILLING/EXCAVATION METHOD

HA	Hand Auger	**RD**	Rotary blade or drag bit	**NQ**	Diamond Core - 47 mm
DT	Diatube Coring	**RT**	Rotary Tricone bit	**NMLC**	Diamond Core - 52 mm
NDD	Non-destructive digging	**RAB**	Rotary Air Blast	**HQ**	Diamond Core - 63 mm
AS*	Auger Screwing	**RC**	Reverse Circulation	**HMLC**	Diamond Core - 63 mm
AD*	Auger Drilling	**PT**	Push Tube	**BH**	Tractor Mounted Backhoe
***V**	V-Bit	**CT**	Cable Tool Rig	**EX**	Tracked Hydraulic Excavator
***T**	TC-Bit, e.g. AD/T	**JET**	Jetting	**EE**	Existing Excavation
ADH	Hollow Auger	**WB**	Washbore or Bailer	**HAND**	Excavated by Hand Methods

PENETRATION RESISTANCE

L	**Low Resistance**	Rapid penetration/ excavation possible with little effort from equipment used.
M	**Medium Resistance**	Penetration/ excavation possible at an acceptable rate with moderate effort from equipment used.
H	**High Resistance**	Penetration/ excavation is possible but at a slow rate and requires significant effort from equipment used.
R	**Refusal/Practical Refusal**	No further progress possible without risk of damage or unacceptable wear to equipment used.

These assessments are subjective and are dependent on many factors, including equipment power and weight, condition of excavation or drilling tools and experience of the operator.

WATER

Standing Water Level

Partial water loss

Water Seepage

Complete Water Loss

GWNO	GROUNDWATER NOT OBSERVED - Observation of groundwater, whether present or not, was not possible due to drilling water, surface seepage or cave-in of the borehole/ test pit.
GWNE	GROUNDWATER NOT ENCOUNTERED - Borehole/ test pit was dry soon after excavation. However, groundwater could be present in less permeable strata. Inflow may have been observed had the borehole/ test pit been left open for a longer period.

SAMPLING AND TESTING

SPT	Standard Penetration Test to AS1289.6.3.1-2004
4,7,11 N=18	4,7,11 = Blows per 150mm. N = Blows per 300mm penetration following a 150mm seating drive
30/80mm	Where practical refusal occurs, the blows and penetration for that interval are reported
RW	Penetration occurred under the rod weight only
HW	Penetration occurred under the hammer and rod weight only
HB	Hammer double bouncing on anvil
Sampling	
DS	Disturbed Sample
ES	Sample for environmental testing
BDS	Bulk disturbed Sample
GS	Gas Sample
WS	Water Sample
U50	Thin walled tube sample - number indicates nominal sample diameter in millimetres
Testing	
FP	Field Permeability test over section noted
FVS	Field Vane Shear test expressed as uncorrected shear strength (sv= peak value, sr= residual value)
PID	Photoionisation Detector reading in ppm
PM	Pressuremeter test over section noted
PP	Pocket Penetrometer test expressed as instrument reading in kPa
WPT	Water Pressure tests
DCP	Dynamic Cone Penetrometer test
CPT	Static Cone Penetration test
CPTu	Static Cone Penetration test with pore pressure (u) measurement

ROCK CORE RECOVERY

TCR=Total Core Recovery (%)

$$= \frac{Length\ of\ core\ recovered}{Length\ of\ core\ run} \times 100$$

SCR=Solid Core Recovery (%)

$$= \frac{\sum Length\ of\ cylindrical\ core\ recovered}{Length\ of\ core\ run} \times 100$$

RQD = Rock Quality Designation (%)

$$= \frac{\sum Axial\ lengths\ of\ core > 100mm}{Length\ of\ core\ run} \times 100$$

GEOLOGICAL BOUNDARIES

———————— = Observed Boundary (position known)

– – – – – – – – – – = Observed Boundary (position approximate)

– –?– –?– –?– – = Boundary (interpreted or inferred)

METHOD OF SOIL DESCRIPTION USED ON BOREHOLE AND TEST PIT LOGS

	FILL		ORGANIC SOILS (OL, OH or Pt)		CLAY (CL, CI or CH)
	COUBLES or BOULDERS		SILT (ML or MH)		SAND (SP or SW)
	GRAVEL (GP or GW)	Combinations of these basic symbols may be used to indicate mixed materials such as sandy clay			

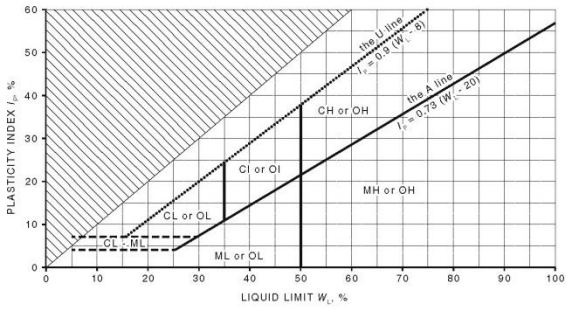
CLASSIFICATION AND INFERRED STRATIGRAPHY

Soil is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS 1726:2017, Section 6.1 – Soil description and classification.

PARTICLE SIZE CHARACTERISTICS

Fraction	Components	Sub Division	Size mm
Oversize	BOULDERS		>200
	COBBLES		63 to 200
Coarse grained soil	GRAVEL	Coarse	19 to 63
		Medium	6.7 to 19
		Fine	2.36 to 6.7
	SAND	Coarse	0.6 to 2.36
		Medium	0.21 to 0.6
		Fine	0.075 to 0.21
Fine grained soil	SILT		0.002 to 0.075
	CLAY		<0.002

PLASTICITY PROPERTIES



GROUP SYMBOLS

Major Divisions		Symbol	Description
COARSE GRAINED SOILS More than 65% of soil excluding oversize fraction is greater than 0.075mm	GRAVEL More than 50% of coarse fraction is >2.36mm	GW	Well graded gravel and gravel-sand mixtures, little or no fines.
		GP	Poorly graded gravel and gravel-sand mixtures, little or no fines.
		GM	Silty gravel, gravel-sand-silt mixtures.
		GC	Clayey gravel, gravel-sand-clay mixtures.
	SAND More than 50% of coarse fraction is <2.36 mm	SW	Well graded sand and gravelly sand, little or no fines.
		SP	Poorly graded sand and gravelly sand, little or no fines.
		SM	Silty sand, sand-silt mixtures.
		SC	Clayey sand, sandy-clay mixtures.
FINE GRAINED SOILS More than 35% of soil excluding oversized fraction is less than 0.075mm	Liquid Limit less < 50%	ML	Inorganic silts of low plasticity, very fine sands, rock flour, silty or clayey fine sands.
		CL, CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays.
		OL	Organic silts and organic silty clays of low plasticity.
	Liquid Limit > than 50%	MH	Inorganic silts of high plasticity.
		CH	Inorganic clays of high plasticity.
		OH	Organic clays of medium to high plasticity.
	Highly Organic soil	PT	Peat muck and other highly organic soils.

MOISTURE CONDITION

Symbol	Term	Description
D	Dry	Non- cohesive and free-running.
M	Moist	Soils feel cool, darkened in colour. Soil tends to stick together.
W	Wet	Soils feel cool, darkened in colour. Soil tends to stick together, free water forms when handling.

Moisture content of cohesive soils shall be described in relation to plastic limit (PL) or liquid limit (LL) for soils with higher moisture content as follows: Moist, dry of plastic limit (w < PL); Moist, near plastic limit (w ≈ PL); Moist, wet of plastic limit (w < PL); Wet, near liquid limit (w ≈ LL), Wet, wet of liquid limit (w > LL),

CONSISTENCY

Symbol	Term	Undrained Shear Strength (kPa)	SPT "N" #
VS	Very Soft	≤ 12	≤ 2
S	Soft	>12 to ≤ 25	>2 to ≤ 4
F	Firm	>25 to ≤ 50	>4 to 8
St	Stiff	>50 to ≤ 100	>8 to 15
VSt	Very Stiff	>100 to ≤ 200	>15 to 30
H	Hard	>200	>30
Fr	Friable	-	

DENSITY

Symbol	Term	Density Index %	SPT "N" #
VL	Very Loose	≤ 15	0 to 4
L	Loose	>15 to ≤ 35	4 to 10
MD	Medium Dense	>35 to ≤ 65	10 to 30
D	Dense	>65 to ≤ 85	30 to 50
VD	Very Dense	>85	Above 50

In the absence of test results, consistency and density may be assessed from correlations with the observed behaviour of the material.
SPT correlations are not stated in AS1726:2017, and may be subject to corrections for overburden pressure and equipment type.

MINOR COMPONENTS

Term	Assessment Guide	Proportion by Mass
Trace	Presence just detectable by feel or eye but soil properties little or no different to general properties of primary component	Coarse grained soils: ≤ 5% Fine grained soil: ≤ 15%
With	Presence easily detectable by feel or eye but soil properties little or no different to general properties of primary component	Coarse grained soils: 5 - 12% Fine grained soil: 15 - 30%
Prefix	Presence easily detectable by feel or eye in conjunction with the general properties of primary component	Coarse grained soils: >12% Fine grained soil: >30%

TERMS FOR ROCK MATERIAL STRENGTH AND WEATHERING

CLASSIFICATION AND INFERRED STRATIGRAPHY

Rock is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS1726 – 2017, Section 6.2 – Rock identification, description and classification.

ROCK MATERIAL STRENGTH CLASSIFICATION

Symbol	Term	Point Load Index, $Is_{(50)}$ (MPa) #	Field Guide
VL	Very Low	0.03 to 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30 mm can be broken by finger pressure.
L	Low	0.1 to 0.3	Easily scored with a knife; indentations 1 mm to 3 mm show in the specimen with firm blows of pick point; has dull sound under hammer. A piece of core 150 mm long by 50 mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
M	Medium	0.3 to 1	Readily scored with a knife; a piece of core 150 mm long by 50 mm diameter can be broken by hand with difficulty.
H	High	1 to 3	A piece of core 150 mm long by 50 mm diameter cannot be broken by hand but can be broken with pick with a single firm blow; rock rings under hammer.
VH	Very High	3 to 10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
EH	Extremely High	>10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

 # Rock Strength Test Results

▼ Point Load Strength Index, $Is_{(50)}$, Axial test (MPa)

● Point Load Strength Index, $Is_{(50)}$, Diametral test (MPa)

Relationship between rock strength test result ($Is_{(50)}$) and unconfined compressive strength (UCS) will vary with rock type and strength, and should be determined on a site-specific basis. However UCS is typically 20 x $Is_{(50)}$.

ROCK MATERIAL WEATHERING CLASSIFICATION

Symbol		Term	Field Guide
RS		Residual Soil	Soil developed on extremely weathered rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the soil has not been significantly transported.
XW		Extremely Weathered	Rock is weathered to such an extent that it has soil properties - i.e. it either disintegrates or can be remoulded, in water.
DW	HW	Distinctly Weathered	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores. In some environments it is convenient to subdivide into Highly Weathered and Moderately Weathered, with the degree of alteration typically less for MW.
	MW		
SW		Slightly Weathered	Rock slightly discoloured but shows little or no change of strength relative to fresh rock.
FR		Fresh	Rock shows no sign of decomposition or staining.

ABBREVIATIONS AND DESCRIPTIONS FOR ROCK MATERIAL AND DEFECTS

CLASSIFICATION AND INFERRED STRATIGRAPHY
Rock is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS1726 – 2017, Section 6.2 – Rock identification, description and classification.

ROCK MATERIAL DESCRIPTION

Layering	
Term	**Description**
Massive	No layering apparent
Indistinct	Layering just visible; little effect on properties
Distinct	Layering (bedding, foliation, cleavage) distinct; rock breaks more easily parallel to layering

Structure	
Term	**Spacing (mm)**
Thinly laminated	<6
Laminated	6 – 20
Very thinly bedded	20 – 60
Thinly bedded	60 – 200
Medium bedded	200 – 600
Thickly bedded	600 – 2,000
Very thickly bedded	> 2,000

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT TYPES

Defect Type	Abbr.	Description
Joint	JT	Surface of a fracture or parting, formed without displacement, across which the rock has little or no tensile strength. May be closed or filled by air, water or soil or rock substance, which acts as cement.
Bedding Parting	BP	Surface of fracture or parting, across which the rock has little or no tensile strength, parallel or sub-parallel to layering/ bedding. Bedding refers to the layering or stratification of a rock, indicating orientation during deposition, resulting in planar anisotropy in the rock material.
Foliation	FL	Repetitive planar structure parallel to the shear direction or perpendicular to the direction of higher pressure, especially in metamorphic rock, e.g. Schistosity (SH) and Gneissosity.
Contact	CO	The surface between two types or ages of rock.
Cleavage	CL	Cleavage planes appear as parallel, closely spaced and planar surfaces resulting from mechanical fracturing of rock through deformation or metamorphism, independent of bedding.
Sheared Surface	SSU	A near planar, curved or undulating surface which is usually smooth, polished or slickensided.
Sheared Seam/ Zone (Fault)	SS/SZ	Seam or zone with roughly parallel almost planar boundaries of rock substance cut by closely spaced (often <50 mm) parallel and usually smooth or slickensided joints or cleavage planes.
Crushed Seam/ Zone (Fault)	CS/CZ	Seam or zone composed of disoriented usually angular fragments of the host rock substance, with roughly parallel near-planar boundaries. The brecciated fragments may be of clay, silt, sand or gravel sizes or mixtures of these.
Extremely Weathered Seam/ Zone	XWS/ XWZ	Seam of soil substance, often with gradational boundaries, formed by weathering of the rock material in places.
Infilled Seam	IS	Seam of soil substance, usually clay or clayey, with very distinct roughly parallel boundaries, formed by soil migrating into joint or open cavity.
Schistocity	SH	The foliation in schist or other coarse grained crystalline rock due to the parallel arrangement of platy or prismatic mineral grains, such as mica.
Vein	VN	Distinct sheet-like body of minerals crystallised within rock through typically open-space filling or crack-seal growth.

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT SHAPE AND ROUGHNESS

Shape	Abbr.	Description	Roughness	Abbr.	Description
Planar	PR	Consistent orientation	Polished	POL	Shiny smooth surface
Curved	CU	Gradual change in orientation	Slickensided	SL	Grooved or striated surface, usually polished
Undulating	UN	Wavy surface	Smooth	SM	Smooth to touch. Few or no surface irregularities
Stepped	ST	One or more well defined steps	Rough	RO	Many small surface irregularities (amplitude generally <1mm). Feels like fine to coarse sandpaper
Irregular	IR	Many sharp changes in orientation	Very Rough	VR	Many large surface irregularities, amplitude generally >1mm. Feels like very coarse sandpaper

Orientation: **Vertical Boreholes –** The dip (inclination from horizontal) of the defect.
Inclined Boreholes – The inclination is measured as the acute angle to the core axis.

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT COATING

Coating	Abbr.	Description
Clean	CN	No visible coating or infilling
Stain	SN	No visible coating but surfaces are discoloured by staining, often limonite (orange-brown)
Veneer	VNR	A visible coating of soil or mineral substance, usually too thin to measure (< 1 mm); may be patchy

DEFECT APERTURE

Aperture	Abbr.	Description
Closed	-	Closed.
Open	OP	Without any infill material.
Infilled	-	Soil or rock i.e. clay, talc, pyrite, quartz, etc.

Appendix G - Field Data Sheets

EI Australia
Suite 6.01, 55 Miller Street
PYRMONT, NSW, 2009

ABN 33 102 449 507
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

Instrument: Mini RAE 3000

Serial Number: 592-906667 - EI **PID02** ☑ **OR** 592-901345 - EI **PID03** ☐

Instrument Conditions: Good

Calibration gas species: Isobutylene.

Calibration gas concentration: 100 ppm

Gas bottle number: _____

This PID has been calibrated to Isobutylene gas with the span concentration displayed as 100.0 ppm at 100 ppm span setting (allowable range +/-10ppm from span setting).

The PID is initially zero calibrated in fresh air.

Remaining gas in bottle: <150 psi (if reading is <250 psi, notify Equipment Manager to arrange new gas bottle order)

The above detector was calibrated in accordance with manufacturer's specifications.

Signed: Emad Iqar

Date: 24/7/19

Time: 8:45 am

Appendix H - Chain of Custody and Sample Receipt Forms

page 1.

Sheet 1 of 1

Site: 71 Fig Hill Lane, Dunmore NSW

Project No: E24306. E03

Laboratory: 667710

Eurofins Environment Testing Aust. P/L
6 / 16 Mars Road,
Lane Cove NSW 2066
P: 02 9900 8400

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM[B] / PAH
TP101_0.1-0.2		J/ZLB	24-7-19	AM/PM		X		X															
TP101_0.4-0.5		↓	↓	↓		↓		X															
TP102_0.1-0.2								X															
TP102_0.3-0.4								X															
TP103_0.1-0.2								X															
TP103_0.4-0.5								X															
TP104_0.1-0.2								X															
TP104_0.5-0.6								X															
TP105_0.1-0.2								X															
TP105_0.5-0.6								X															
TP106_0.0-0.1																			+				
TP106_0.5-0.6		↓	↓	↓		✓		X															

Comments

HM[A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / Turbidity NTU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND

- [X] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
J= solvent washed, acid rinsed,Teflon sealed, glass jar
S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB = Zip-Lock Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI): CM
Print: Clare Madigan
Signature: C Madigan
Date: 25-7-19

Received by (Eurofins):
Print: Elvis D
Signature:
Date: 25/7/19

Sampler's Comments:
*please note ZLB labelled TP107_0.9-1.0 should be labelled TP109_0.1-0.2! Thanks. Please report it this way

eiaustralia
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

page 2.

Sheet 2 of 5

Site: 71 Fig Hill Lane, Dunmore NSW

Project No: E24306. E03

Laboratory: 66771C

Eurofins Environment Testing Aust. P/L
6 / 16 Mars Road,
Lane Cove NSW 2066
P: 02 9900 8400

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM [B] / PAH
TP106_0.7-0.8		J/ZLB	25-7-19	AM/PM		X		X															
TP107_0.2-0.3																				X			
TP107_1.0-1.1								X															
TP107_1.3-1.4																				X			
TP107_1.8-1.9								X															
TP108_0.3-0.4								X															
TP108_0.5-0.6								X															
TP109_0.1-0.2								X															
TP109_0.6-0.7								X															
TP110_0.2-0.3								X															
TP110_0.9-1.0								X															
TP111_0.1-0.2		↓	↓	↓		↓		X															

Comments

HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / Turbidity NTU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND

- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
J= solvent washed, acid rinsed, Teflon sealed, glass jar
S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB = Zip-Lock Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI): CM	Received by (Eurofins):
Print: Clare Madigan	Print: Elvis
Signature:	Signature:
Date: 25-7-19	Date: 25/7/19

Sampler's Comments:

eiaustralia
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

page 3.

Sheet 3 of 5

Site: 71 Fig Hill Lane, Dunmore NSW

Project No: E24566. E03

Laboratory: 667710

Eurofins Environment Testing Aust. P/L
6 / 16 Mars Road,
Lane Cove NSW 2066
P: 02 9900 8400

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM [B] / PAH
TP111_0.6-0.7		J/ZLB	24-7-19	AM/PM		X		X															
TP112_0.1-0.2		"	"	"		"		X															
TP112_0.5-0.6		"	"	"		"		X															
TP113_0.2-0.3		"	"	"		"		X															
TP113_1.2-1.3		"	"	"		"		X															
TP113_2.5-2.6		"	"	"		"														X			
TP114_0.1_0.2		"	"	"		"		X															
TP114_0.5-0.6		"	"			"		X															
TP115_0.1-0.2		"	"	"		"		X															
TP115_1.1_1.2		"	"	"		"		X															
TP116_0.0-0.1		"	"	"		"		X															
TP116_0.6-0.7		"	"	"		"		X															

Comments

HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / Turbidity NTU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND

- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
J= solvent washed, acid rinsed,Teflon sealed, glass jar
S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB = Zip-Lock Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI): CM
Print: Clare Madigan
Signature: C Madigan
Date: 25-7-19

Received by (Eurofins):
Print: Elvis D
Signature:
Date: 25/7/19

Sampler's Comments:

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

eiaustralia
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

Sheet 4 of 5

Site: 71 Fig Hill Lane, Dunmore NSW

Project No: E24306. E03

Laboratory: 667710

Eurofins Environment Testing Aust. P/L
6 / 16 Mars Road,
Lane Cove NSW 2066
P: 02 9900 8400

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM[B] / PAH
TP117_0.3-0.4		J/ZLB	24-7-19	AM/PM		X		X															
TP117_0.8-0.9		↓	↓	↓		↓		X															
TP118_0.1-0.2								X															
TP118_0.5-0.6								X															
TP119_0.2-0.3								X															
TP119_0.5-0.6								X															
TP120_0.1-0.2								X															
TP120_0.6-0.7		↓	↓	↓		↓		X															
TPQD1		J	24-7-19	AM/PM		X				X													
TPQD2		J				X				X													
TPQR1		2x VC 1xA 1x)			X					X													
TPQRB		↓	↓	↓	X														X				

Comments

HM[A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / Turbidity NTU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND

- [X] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
J= solvent washed, acid rinsed, Teflon sealed, glass jar
S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB = Zip-Lock Bag

A=Amber Bottle

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI): CM	Received by (Eurofins):
Print: Clare Madigan	Print: Elvis D
Signature: CMadigan	Signature:
Date: 25-7-19	Date: 25/7/19

Sampler's Comments:

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

eiaustralia
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

page 5.

Sheet 5 of 5

Site: 71 Fig Hill Lane Area, Dunmore NSW

Project No: E24306. E03

Laboratory: 667710

Eurofins Environment Testing Aust. P/L
6 / 16 Mars Road,
Lane Cove NSW 2066
P: 02 9900 8400

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS				TCLP HM[B] / PAH
TPQTS		VC	Lab prepared			X					X												
TPQTB		VL	↓			↓					↓												

Comments

HM[A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / Turbidity NTU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND

- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
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S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB = Zip-Lock Bag

eiaustralia
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

COC March 2018 FORM v.4 - SGS

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Sampler's Name (EI): CM	Received by (Eurofins):
Print: Clare Madigan	Print: Elvis D
Signature: cmadigan	Signature:
Date: 25-7-19	Date: 25/7/19

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

Report with EI Waste Classification Table ☐

Sampler's Comments:

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

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

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

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

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: To Be Advised
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B7	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	TP101_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36539			X		X
2	TP101_0.4-0.5	Jul 24, 2019		Soil	S19-Jl36540			X		X
3	TP102_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36541			X		X
4	TP102_0.3-0.4	Jul 24, 2019		Soil	S19-Jl36542			X		X
5	TP103_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36543			X		X
6	TP103_0.4-0.5	Jul 24, 2019		Soil	S19-Jl36544			X		X
7	TP104_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36545			X		X
8	TP104_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36546			X		X
9	TP105_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36547			X		X

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

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

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

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

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

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Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B7	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	TP105_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36548			X		X
11	TP106_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36549			X		X
12	TP106_0.7-0.8	Jul 25, 2019		Soil	S19-Jl36550			X		X
13	TP107_1.0-1.1	Jul 25, 2019		Soil	S19-Jl36551			X		X
14	TP107_1.8-1.9	Jul 25, 2019		Soil	S19-Jl36552			X		X
15	TP108_0.3-0.4	Jul 25, 2019		Soil	S19-Jl36553			X		X
16	TP108_0.5-0.6	Jul 25, 2019		Soil	S19-Jl36554			X		X
17	TP109_0.1-0.2	Jul 25, 2019		Soil	S19-Jl36555			X		X
18	TP109_0.6-0.7	Jul 25, 2019		Soil	S19-Jl36556			X		X
19	TP110_0.2-0.3	Jul 25, 2019		Soil	S19-Jl36557			X		X
20	TP110_0.9-1.0	Jul 25, 2019		Soil	S19-Jl36558			X		X
21	TP111_0.1-0.2	Jul 25, 2019		Soil	S19-Jl36559			X		X

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
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NATA # 1261
Site # 1254 & 14271

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Unit F3, Building F
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Lane Cove West NSW 2066
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NATA # 1261 Site # 18217

Brisbane
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Murarrie QLD 4172
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NATA # 1261 Site # 20794

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: To Be Advised
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B7	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
22	TP111_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36560			X		X
23	TP112_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36561			X		X
24	TP112_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36562			X		X
25	TP113_0.2-0.3	Jul 24, 2019		Soil	S19-Jl36563			X		X
26	TP113_1.2-1.3	Jul 24, 2019		Soil	S19-Jl36564			X		X
27	TP114_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36585			X		X
28	TP114_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36586			X		X
29	TP115_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36587			X		X
30	TP115_1.1-1.2	Jul 24, 2019		Soil	S19-Jl36588			X		X
31	TP116_0.0-0.1	Jul 24, 2019		Soil	S19-Jl36589			X		X
32	TP116_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36590			X		X
33	TP117_0.3-0.4	Jul 24, 2019		Soil	S19-Jl36591			X		X

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

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

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

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
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NATA # 1261 Site # 20794

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: To Be Advised
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B7	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
34	TP117_0.8-0.9	Jul 24, 2019		Soil	S19-Jl36592			X		X
35	TP118_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36593			X		X
36	TP118_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36594			X		X
37	TP119_0.2-0.3	Jul 24, 2019		Soil	S19-Jl36595			X		X
38	TP119_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36596			X		X
39	TP120_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36597			X		X
40	TP120_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36598			X		X
41	TPQD1	Jul 24, 2019		Soil	S19-Jl36599			X	X	
42	TPQD2	Jul 24, 2019		Soil	S19-Jl36600			X	X	
43	TPQR1	Jul 24, 2019		Water	S19-Jl36601				X	
44	TPQTS	Jul 24, 2019		Soil	S19-Jl36602		X			
45	TPQTB	Jul 24, 2019		Soil	S19-Jl36603		X			

ABN – 50 005 085 521
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Melbourne
6 Monterey Road
Dandenong South VIC 3175
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NATA # 1261
Site # 1254 & 14271

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Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: To Be Advised
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B7	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
46	LAB SPIKE	Jul 24, 2019		Soil	S19-Jl36604		X			
47	TP106_0.0-0.1	Jul 24, 2019		Soil	S19-Jl36618	X				
48	TP107_0.2-0.3	Jul 25, 2019		Soil	S19-Jl36619	X				
49	TP107_1.3-1.4	Jul 25, 2019		Soil	S19-Jl36620	X				
50	TP113_2.5-2.6	Jul 24, 2019		Soil	S19-Jl36621	X				
51	TPQRB	Jul 24, 2019		Water	S19-Jl36622	X				
Test Counts						5	3	42	3	40

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

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

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

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

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

Sample Receipt Advice

Company name:	**EI Australia Wollongong**
Contact name:	Clare Madigan
Project name:	71 FIG HILL LANE DUNMORE NSW
Project ID:	E24306.E03
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Jul 25, 2019 12:55 PM
Eurofins | mgt reference:	**667710**

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).

Contact notes

If you have any questions with respect to these samples please contact:

Alena Bounkeua on Phone : or by e.mail: AlenaBounkeua@eurofins.com

Results will be delivered electronically via e.mail to Clare Madigan - clare.madigan@eiaustralia.com.au.

Enviro Sample NSW

To: Alena Bounkeua
Subject: RE: *Additional analysis 1 day TAT* Report 667710 : Site 71 FIG HILL LANE DUNMORE NSW (E24306.E03)

From: Clare Madigan - EIAustralia [mailto:clare.madigan@eiaustralia.com.au]
Sent: Friday, 2 August 2019 4:24 PM
To: Alena Bounkeua
Cc: Enviro Sample NSW
Subject: RE: Eurofins Test Results - Report 667710 : Site 71 FIG HILL LANE DUNMORE NSW (E24306.E03)

EXTERNAL EMAIL*

Hi Alena,

Can we please request sample TP119_0.5-0.6 is analysed for pH on 24hr TAT.

Should you have any queries, please do not hesitate to contact me.

Kind Regards,

Clare Madigan | Environmental Scientist

E: clare.madigan@eiaustralia.com.au
T: 02 9516 0722 **M:** 0467 639 062
Head Office: Suite 6.01, 55 Miller Street, Pyrmont, NSW 2009
Wollongong: Suite 101, Level 1, 1 Burelli Street, Wollongong, NSW 2500
www.eiaustralia.com.au

From: AlenaBounkeua@eurofins.com [mailto:AlenaBounkeua@eurofins.com]
Sent: Thursday, 1 August 2019 1:11 PM
To: Clare Madigan - EIAustralia
Subject: Eurofins Test Results - Report 667710 : Site 71 FIG HILL LANE DUNMORE NSW (E24306.E03)

Dear Clare,

Please find attached final results for your project in the subject header.

Kind Regards

Alena Bounkeua
Analytical Services Manager

Eurofins | Environment Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 2 9900 8414
Mobile: +61 429 365 410
Email: AlenaBounkeua@eurofins.com
Website: environment.eurofins.com.au

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

eurofins | Environment Testing

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

Melbourne
6 Monterey Road
Dandenong South VIC 3175
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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: ADDITIONAL - 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 669304
Phone: 0467 639 062
Fax:

Received: Aug 2, 2019 4:44 PM
Due: Aug 5, 2019
Priority: 1 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	TP119_0.5-0.6	Jul 24, 2019		Soil	S19-Au02859	X	X
Test Counts						1	1

eurofins | Environment Testing

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

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Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

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

Sample Receipt Advice

Company name:	**EI Australia Wollongong**
Contact name:	Clare Madigan
Project name:	ADDITIONAL - 71 FIG HILL LANE DUNMORE NSW
Project ID:	E24306.E03
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Aug 2, 2019 4:44 PM
Eurofins reference:	**669304**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Alena Bounkeua on Phone : or by e.mail: AlenaBounkeua@eurofins.com

Results will be delivered electronically via e.mail to Clare Madigan - clare.madigan@eiaustralia.com.au.

Sheet 1 of 1

Site: 71 Fig Hill Lane, Dunmore NSW

Project No: E24306. E03

Laboratory: **Envirolab Services**
12 Ashley Street,
CHATSWOOD NSW 2067
P: 02 9910 6200

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS				TCLP HM[B] / PAH
TPQT1	1	J	24-7-19	AM/PM		X				X													
TPQT2	2	↓	↓	↓		↓				↓													

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 222434

Date Received: 25/7/2019
Time Received: 1645
Received by: RA
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Comments

HM[A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND

- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
J= solvent washed, acid rinsed,Teflon sealed, glass jar
S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB = Zip-Lock Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI): CM	Received by (Envirolab)
Print: Clare Madigan	Print: RAy
Signature: Cmadigan	Signature: R
Date: 25-7-19	Date: 25/7/2019

Sampler's Comments:

eiaustralia
Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	EI Australia
Attention	Clare Madigan

Sample Login Details

Your reference	E24306.E03, Dunmore
Envirolab Reference	222434
Date Sample Received	25/07/2019
Date Instructions Received	25/07/2019
Date Results Expected to be Reported	01/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	16.1
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	Acid Extractable metalsin soil
TPQT1	✓	✓	✓
TPQT2	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Appendix I - Laboratory Analytical Reports

EI Australia Wollongong
Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Clare Madigan**

Report **667710-S**
Project name 71 FIG HILL LANE DUNMORE NSW
Project ID E24306.E03
Received Date Jul 25, 2019

Client Sample ID			**TP101_0.1-0.2**	**TP101_0.4-0.5**	**TP102_0.1-0.2**	**TP102_0.3-0.4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S19-Jl36539**	**S19-Jl36540**	**S19-Jl36541**	**S19-Jl36542**
Date Sampled			**Jul 24, 2019**	**Jul 24, 2019**	**Jul 24, 2019**	**Jul 24, 2019**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	95	92	88	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP101_0.1-0.2	TP101_0.4-0.5	TP102_0.1-0.2	TP102_0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36539	S19-Jl36540	S19-Jl36541	S19-Jl36542
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	83	71	73	69
p-Terphenyl-d14 (surr.)	1	%	75	64	52	58
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	96	62	59	66
Tetrachloro-m-xylene (surr.)	1	%	97	64	63	62
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP101_0.1-0.2	TP101_0.4-0.5	TP102_0.1-0.2	TP102_0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36539	S19-Jl36540	S19-Jl36541	S19-Jl36542
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	87	65	65	50
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	96	62	59	66
Tetrachloro-m-xylene (surr.)	1	%	97	64	63	62
Heavy Metals						
Arsenic	2	mg/kg	4.4	< 2	4.2	5.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	40	14	23	24
Copper	5	mg/kg	40	91	22	26
Lead	5	mg/kg	35	7.6	33	52
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	7.8	13	12
Zinc	5	mg/kg	70	47	72	71
% Moisture	1	%	17	11	15	17

Client Sample ID			TP103_0.1-0.2	TP103_0.4-0.5	TP104_0.1-0.2	TP104_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36543	S19-Jl36544	S19-Jl36545	S19-Jl36546
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	96	91	92	90
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
2-Fluorobiphenyl (surr.)	1	%	91	94	91	116
p-Terphenyl-d14 (surr.)	1	%	73	90	92	145

Client Sample ID			TP103_0.1-0.2	TP103_0.4-0.5	TP104_0.1-0.2	TP104_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36543	S19-Jl36544	S19-Jl36545	S19-Jl36546
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	128	89	87	124
Tetrachloro-m-xylene (surr.)	1	%	101	105	97	131
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP103_0.1-0.2	TP103_0.4-0.5	TP104_0.1-0.2	TP104_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36543	S19-Jl36544	S19-Jl36545	S19-Jl36546
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	148	105	108	130
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	128	89	87	124
Tetrachloro-m-xylene (surr.)	1	%	101	105	97	131
Heavy Metals						
Arsenic	2	mg/kg	5.2	4.8	5.4	3.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	91	26	30	14
Copper	5	mg/kg	29	28	29	64
Lead	5	mg/kg	35	33	43	26
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	15	14	8.1
Zinc	5	mg/kg	79	69	110	62
% Moisture	1	%	16	17	21	22

Client Sample ID			TP105_0.1-0.2	TP105_0.5-0.6	TP106_0.5-0.6	TP106_0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36547	S19-Jl36548	S19-Jl36549	S19-Jl36550
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			TP105_0.1-0.2	TP105_0.5-0.6	TP106_0.5-0.6	TP106_0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36547	S19-Jl36548	S19-Jl36549	S19-Jl36550
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	88	96	90	93
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	67	60	72	68
p-Terphenyl-d14 (surr.)	1	%	74	64	71	69
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP105_0.1-0.2	TP105_0.5-0.6	TP106_0.5-0.6	TP106_0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36547	S19-Jl36548	S19-Jl36549	S19-Jl36550
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	78	91	90
Tetrachloro-m-xylene (surr.)	1	%	67	62	73	72
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP105_0.1-0.2	TP105_0.5-0.6	TP106_0.5-0.6	TP106_0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-JI36547	S19-JI36548	S19-JI36549	S19-JI36550
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	91	79	78	94
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	78	91	90
Tetrachloro-m-xylene (surr.)	1	%	67	62	73	72
Heavy Metals						
Arsenic	2	mg/kg	4.9	3.4	5.4	2.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	28	27	18	15
Copper	5	mg/kg	16	48	12	100
Lead	5	mg/kg	25	16	6.4	10
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	11	< 5	7.6
Zinc	5	mg/kg	48	56	29	56
% Moisture	1	%	20	15	19	13

Client Sample ID			TP107_1.0-1.1	TP107_1.8-1.9	TP108_0.3-0.4	TP108_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-JI36551	S19-JI36552	S19-JI36553	S19-JI36554
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	96	102	87

Client Sample ID			TP107_1.0-1.1	TP107_1.8-1.9	TP108_0.3-0.4	TP108_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36551	S19-Jl36552	S19-Jl36553	S19-Jl36554
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	82	72	75	89
p-Terphenyl-d14 (surr.)	1	%	61	67	83	64
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP107_1.0-1.1	TP107_1.8-1.9	TP108_0.3-0.4	TP108_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36551	S19-Jl36552	S19-Jl36553	S19-Jl36554
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	83	79	93	71
Tetrachloro-m-xylene (surr.)	1	%	72	72	77	96
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	79	85	86	53

Client Sample ID			TP107_1.0-1.1	TP107_1.8-1.9	TP108_0.3-0.4	TP108_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36551	S19-Jl36552	S19-Jl36553	S19-Jl36554
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	83	79	93	71
Tetrachloro-m-xylene (surr.)	1	%	72	72	77	96
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.5	2.9	3.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	10	180	16	19
Copper	5	mg/kg	200	100	120	38
Lead	5	mg/kg	< 5	12	21	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.8	11	8.2	9.4
Zinc	5	mg/kg	50	84	68	57
% Moisture	1	%	5.9	13	10.0	19

Client Sample ID			TP109_0.1-0.2	TP109_0.6-0.7	TP110_0.2-0.3	TP110_0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36555	S19-Jl36556	S19-Jl36557	S19-Jl36558
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	98	85	99	93
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			TP109_0.1-0.2	TP109_0.6-0.7	TP110_0.2-0.3	TP110_0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36555	S19-Jl36556	S19-Jl36557	S19-Jl36558
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	88	72	73
p-Terphenyl-d14 (surr.)	1	%	60	59	75	55
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP109_0.1-0.2	TP109_0.6-0.7	TP110_0.2-0.3	TP110_0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36555	S19-Jl36556	S19-Jl36557	S19-Jl36558
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	70	71	94	74
Tetrachloro-m-xylene (surr.)	1	%	92	92	73	69
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	55	57	90	72
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP109_0.1-0.2	TP109_0.6-0.7	TP110_0.2-0.3	TP110_0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-JI36555	S19-JI36556	S19-JI36557	S19-JI36558
Date Sampled			Jul 25, 2019	Jul 25, 2019	Jul 25, 2019	Jul 25, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Dibutylchlorendate (surr.)	1	%	70	71	94	74
Tetrachloro-m-xylene (surr.)	1	%	92	92	73	69
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	2.8	7.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	44	6.6	81	16
Copper	5	mg/kg	160	200	70	33
Lead	5	mg/kg	7.6	18	13	9.6
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.1	8.6	12	< 5
Zinc	5	mg/kg	64	54	71	35
% Moisture	1	%	11	21	13	16

Client Sample ID			TP111_0.1-0.2	TP111_0.6-0.7	TP112_0.1-0.2	TP112_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-JI36559	S19-JI36560	S19-JI36561	S19-JI36562
Date Sampled			Jul 25, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	99	83	85	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP111_0.1-0.2	TP111_0.6-0.7	TP112_0.1-0.2	TP112_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36559	S19-Jl36560	S19-Jl36561	S19-Jl36562
Date Sampled			Jul 25, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	79	74	70	75
p-Terphenyl-d14 (surr.)	1	%	69	66	67	80
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	81	81	90
Tetrachloro-m-xylene (surr.)	1	%	73	73	72	76

Client Sample ID			TP111_0.1-0.2	TP111_0.6-0.7	TP112_0.1-0.2	TP112_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36559	S19-Jl36560	S19-Jl36561	S19-Jl36562
Date Sampled			Jul 25, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	77	81	76	101
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	81	81	90
Tetrachloro-m-xylene (surr.)	1	%	73	73	72	76

Client Sample ID			TP111_0.1-0.2	TP111_0.6-0.7	TP112_0.1-0.2	TP112_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36559	S19-Jl36560	S19-Jl36561	S19-Jl36562
Date Sampled			Jul 25, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.5	< 2	3.8	3.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	54	31	30	19
Copper	5	mg/kg	97	150	32	54
Lead	5	mg/kg	12	13	15	32
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	10	8.9	13	9.5
Zinc	5	mg/kg	57	58	39	110
% Moisture	1	%	12	15	16	15

Client Sample ID			TP113_0.2-0.3	TP113_1.2-1.3	TP114_0.1-0.2	TP114_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36563	S19-Jl36564	S19-Jl36585	S19-Jl36586
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	96	79	94
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP113_0.2-0.3	TP113_1.2-1.3	TP114_0.1-0.2	TP114_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36563	S19-Jl36564	S19-Jl36585	S19-Jl36586
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	71	68	80
p-Terphenyl-d14 (surr.)	1	%	77	67	71	76
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	85	82	90	81
Tetrachloro-m-xylene (surr.)	1	%	79	73	70	75
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2

Client Sample ID			TP113_0.2-0.3	TP113_1.2-1.3	TP114_0.1-0.2	TP114_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36563	S19-Jl36564	S19-Jl36585	S19-Jl36586
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	92	75	93	96
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	85	82	90	81
Tetrachloro-m-xylene (surr.)	1	%	79	73	70	75
Heavy Metals						
Arsenic	2	mg/kg	2.3	< 2	2.9	2.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	32	73	22	22
Copper	5	mg/kg	95	91	110	54
Lead	5	mg/kg	13	8.1	15	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	10	9.9	11	9.3
Zinc	5	mg/kg	60	38	69	60

Client Sample ID			TP113_0.2-0.3	TP113_1.2-1.3	TP114_0.1-0.2	TP114_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36563	S19-Jl36564	S19-Jl36585	S19-Jl36586
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
% Moisture	1	%	12	12	15	12

Client Sample ID			TP115_0.1-0.2	TP115_1.1-1.2	TP116_0.0-0.1	TP116_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36587	S19-Jl36588	S19-Jl36589	S19-Jl36590
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	87	130	110	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP115_0.1-0.2	TP115_1.1-1.2	TP116_0.0-0.1	TP116_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36587	S19-Jl36588	S19-Jl36589	S19-Jl36590
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	88	85	89	87
p-Terphenyl-d14 (surr.)	1	%	67	64	68	63
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	79	89	88	82
Tetrachloro-m-xylene (surr.)	1	%	93	90	96	96
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP115_0.1-0.2	TP115_1.1-1.2	TP116_0.0-0.1	TP116_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36587	S19-Jl36588	S19-Jl36589	S19-Jl36590
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	70	77	80	74
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	79	89	88	82
Tetrachloro-m-xylene (surr.)	1	%	93	90	96	96
Heavy Metals						
Arsenic	2	mg/kg	3.3	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	32	8.9	28	18
Copper	5	mg/kg	79	120	150	170
Lead	5	mg/kg	11	21	7.4	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	9.2	8.3	17
Zinc	5	mg/kg	63	50	60	62
% Moisture	1	%	13	21	5.8	20

Client Sample ID			TP117_0.3-0.4	TP117_0.8-0.9	TP118_0.1-0.2	TP118_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36591	S19-Jl36592	S19-Jl36593	S19-Jl36594
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	79	91	122	81
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	86	85	84	86
p-Terphenyl-d14 (surr.)	1	%	65	61	62	64

Client Sample ID			TP117_0.3-0.4	TP117_0.8-0.9	TP118_0.1-0.2	TP118_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36591	S19-Jl36592	S19-Jl36593	S19-Jl36594
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	84	88	88	85
Tetrachloro-m-xylene (surr.)	1	%	95	92	89	93
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP117_0.3-0.4	TP117_0.8-0.9	TP118_0.1-0.2	TP118_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36591	S19-Jl36592	S19-Jl36593	S19-Jl36594
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	78	73	76	85
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	84	88	88	85
Tetrachloro-m-xylene (surr.)	1	%	95	92	89	93
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.6	< 5	18	< 5
Copper	5	mg/kg	160	110	230	220
Lead	5	mg/kg	17	17	7.3	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	13	9.6	8.7
Zinc	5	mg/kg	61	57	60	60
% Moisture	1	%	18	19	7.9	22

Client Sample ID			TP119_0.2-0.3	TP119_0.5-0.6	TP120_0.1-0.2	TP120_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36595	S19-Jl36596	S19-Jl36597	S19-Jl36598
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			TP119_0.2-0.3	TP119_0.5-0.6	TP120_0.1-0.2	TP120_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36595	S19-Jl36596	S19-Jl36597	S19-Jl36598
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	90	85	84	85
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	67	124	61
p-Terphenyl-d14 (surr.)	1	%	67	60	101	65
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP119_0.2-0.3	TP119_0.5-0.6	TP120_0.1-0.2	TP120_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-Jl36595	S19-Jl36596	S19-Jl36597	S19-Jl36598
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	95	77	133	74
Tetrachloro-m-xylene (surr.)	1	%	94	75	95	78
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP119_0.2-0.3	TP119_0.5-0.6	TP120_0.1-0.2	TP120_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-JI36595	S19-JI36596	S19-JI36597	S19-JI36598
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	93	72	128	87
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	95	77	133	74
Tetrachloro-m-xylene (surr.)	1	%	94	75	95	78
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.3	3.8	3.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.9	12	26	65
Copper	5	mg/kg	180	260	56	77
Lead	5	mg/kg	21	12	29	< 5
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	11	11	150
Zinc	5	mg/kg	70	47	75	80
% Moisture	1	%	29	28	12	21

Client Sample ID			TPQD1	TPQD2	[R20]TPQTS	TPQTB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-JI36599	S19-JI36600	S19-JI36602	S19-JI36603
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	110	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	110	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	110	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	110	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	110	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	110	< 0.3
4-Bromofluorobenzene (surr.)	1	%	118	120	69	76

Client Sample ID			TPQD1	TPQD2	[R20]TPQTS	TPQTB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-JI36599	S19-JI36600	S19-JI36602	S19-JI36603
Date Sampled			Jul 24, 2019	Jul 24, 2019	Jul 24, 2019	Jul 24, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
Heavy Metals						
Arsenic	2	mg/kg	4.7	5.4	-	-
Cadmium	0.4	mg/kg	< 0.4	1.0	-	-
Chromium	5	mg/kg	33	30	-	-
Copper	5	mg/kg	36	85	-	-
Lead	5	mg/kg	35	50	-	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	-
Nickel	5	mg/kg	11	16	-	-
Zinc	5	mg/kg	67	110	-	-
% Moisture	1	%	18	11	-	-

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jul 29, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Jul 29, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 29, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 29, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jul 29, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Jul 29, 2019	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Jul 29, 2019	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Polychlorinated Biphenyls	Melbourne	Jul 29, 2019	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Metals M8	Melbourne	Jul 29, 2019	180 Days
- Method:			
% Moisture	Melbourne	Jul 25, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			

Certificate of Analysis

EI Australia Wollongong
Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:	Clare Madigan
Report	667710-AID
Project Name	71 FIG HILL LANE DUNMORE NSW
Project ID	E24306.E03
Received Date	Jul 25, 2019
Date Reported	Jul 31, 2019

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 71 FIG HILL LANE DUNMORE NSW
Project ID E24306.E03
Date Sampled Jul 24, 2019 to Jul 25, 2019
Report 667710-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP101_0.1-0.2	19-JI36539	Jul 24, 2019	Approximate Sample 178g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP101_0.4-0.5	19-JI36540	Jul 24, 2019	Approximate Sample 91g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP102_0.1-0.2	19-JI36541	Jul 24, 2019	Approximate Sample 301g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP102_0.3-0.4	19-JI36542	Jul 24, 2019	Approximate Sample 74g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP103_0.1-0.2	19-JI36543	Jul 24, 2019	Approximate Sample 133g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP103_0.4-0.5	19-JI36544	Jul 24, 2019	Approximate Sample 117g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP104_0.1-0.2	19-JI36545	Jul 24, 2019	Approximate Sample 92g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP104_0.5-0.6	19-JI36546	Jul 24, 2019	Approximate Sample 126g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP105_0.1-0.2	19-JI36547	Jul 24, 2019	Approximate Sample 120g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP105_0.5-0.6	19-JI36548	Jul 24, 2019	Approximate Sample 142g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP106_0.5-0.6	19-JI36549	Jul 24, 2019	Approximate Sample 252g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP106_0.7-0.8	19-JI36550	Jul 25, 2019	Approximate Sample 95g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP107_1.0-1.1	19-JI36551	Jul 25, 2019	Approximate Sample 115g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP107_1.8-1.9	19-JI36552	Jul 25, 2019	Approximate Sample 172g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP108_0.3-0.4	19-JI36553	Jul 25, 2019	Approximate Sample 205g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP108_0.5-0.6	19-JI36554	Jul 25, 2019	Approximate Sample 186g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP109_0.1-0.2	19-JI36555	Jul 25, 2019	Approximate Sample 167g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP109_0.6-0.7	19-JI36556	Jul 25, 2019	Approximate Sample 254g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP110_0.2-0.3	19-JI36557	Jul 25, 2019	Approximate Sample 191g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP110_0.9-1.0	19-JI36558	Jul 25, 2019	Approximate Sample 259g Sample consisted of: Sand stone and brown soil residue	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP111_0.1-0.2	19-JI36559	Jul 25, 2019	Approximate Sample 157g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP111_0.6-0.7	19-JI36560	Jul 24, 2019	Approximate Sample 143g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP112_0.1-0.2	19-JI36561	Jul 24, 2019	Approximate Sample 191g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP112_0.5-0.6	19-JI36562	Jul 24, 2019	Approximate Sample 244g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP113_0.2-0.3	19-JI36563	Jul 24, 2019	Approximate Sample 216g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP113_1.2-1.3	19-JI36564	Jul 24, 2019	Approximate Sample 124g Sample consisted of: Rocks and brown soil residue	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP114_0.1-0.2	19-JI36585	Jul 24, 2019	Approximate Sample 221g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP114_0.5-0.6	19-JI36586	Jul 24, 2019	Approximate Sample 175g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP115_0.1-0.2	19-JI36587	Jul 24, 2019	Approximate Sample 73g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP115_1.1-1.2	19-JI36588	Jul 24, 2019	Approximate Sample 198g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP116_0.0-0.1	19-JI36589	Jul 24, 2019	Approximate Sample 162g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP116_0.6-0.7	19-JI36590	Jul 24, 2019	Approximate Sample 199g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP117_0.3-0.4	19-JI36591	Jul 24, 2019	Approximate Sample 180g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP117_0.8-0.9	19-JI36592	Jul 24, 2019	Approximate Sample 400g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP118_0.1-0.2	19-JI36593	Jul 24, 2019	Approximate Sample 98g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP118_0.5-0.6	19-JI36594	Jul 24, 2019	Approximate Sample 263g Sample consisted of: Rocks and brown soil residue	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP119_0.2-0.3	19-JI36595	Jul 24, 2019	Approximate Sample 234g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP119_0.5-0.6	19-JI36596	Jul 24, 2019	Approximate Sample 126g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP120_0.1-0.2	19-JI36597	Jul 24, 2019	Approximate Sample 303g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP120_0.6-0.7	19-JI36598	Jul 24, 2019	Approximate Sample 247g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jul 25, 2019	Indefinite

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

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

Terms

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

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

EI Australia Wollongong
Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Clare Madigan**

Report **667710-W**
Project name 71 FIG HILL LANE DUNMORE NSW
Project ID E24306.E03
Received Date Jul 25, 2019

Client Sample ID			**TPQR1**
Sample Matrix			**Water**
Eurofins Sample No.			**S19-Jl36601**
Date Sampled			**Jul 24, 2019**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-36 (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	%	78
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jul 26, 2019	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Jul 26, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 26, 2019	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 26, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Jul 29, 2019	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins | Environment Testing

Certificate of Analysis

EI Australia Wollongong
Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

NATA Accredited
Accreditation Number 1261
Site Number 18217

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Attention: **Clare Madigan**

Report **669304-S**
Project name ADDITIONAL - 71 FIG HILL LANE DUNMORE NSW
Project ID E24306.E03
Received Date Aug 02, 2019

Client Sample ID			**TP119_0.5-0.6**
Sample Matrix			**Soil**
Eurofins Sample No.			**S19-Au02859**
Date Sampled			**Jul 24, 2019**
Test/Reference	LOR	Unit	
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	7.8
% Moisture	1	%	29

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
pH (1:5 Aqueous extract at 25°C as rec.)	Melbourne	Aug 05, 2019	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
% Moisture	Melbourne	Aug 02, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 222434

Client Details

Client	EI Australia
Attention	Clare Madigan
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E24306.E03, Dunmore**
Number of Samples	2 Soil
Date samples received	25/07/2019
Date completed instructions received	25/07/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	01/08/2019
Date of Issue	30/07/2019

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Jaimie Loa-Kum-Cheung, Metals Supervisor
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		222434-1	222434-2
Your Reference	UNITS	TPQT1	TPQT2
Date Sampled		24/07/2019	24/07/2019
Type of sample		Soil	Soil
Date extracted	-	26/07/2019	26/07/2019
Date analysed	-	27/07/2019	27/07/2019
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<3	<3
Surrogate aaa-Trifluorotoluene	%	103	118

svTRH (C10-C40) in Soil			
Our Reference		222434-1	222434-2
Your Reference	UNITS	TPQT1	TPQT2
Date Sampled		24/07/2019	24/07/2019
Type of sample		Soil	Soil
Date extracted	-	26/07/2019	26/07/2019
Date analysed	-	27/07/2019	27/07/2019
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	83	82

Acid Extractable metals in soil			
Our Reference	UNITS	222434-1	222434-2
Your Reference		TPQT1	TPQT2
Date Sampled		24/07/2019	24/07/2019
Type of sample		Soil	Soil
Date prepared	-	26/07/2019	26/07/2019
Date analysed	-	26/07/2019	26/07/2019
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	23	11
Copper	mg/kg	38	38
Lead	mg/kg	29	19
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	9	5
Zinc	mg/kg	54	59

Moisture			
Our Reference		222434-1	222434-2
Your Reference	UNITS	TPQT1	TPQT2
Date Sampled		24/07/2019	24/07/2019
Type of sample		Soil	Soil
Date prepared	-	26/07/2019	26/07/2019
Date analysed	-	29/07/2019	29/07/2019
Moisture	%	14	12

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

Appendix J - QA/QC Assessment

J.1 Site location

J.1.1 Introduction

For the purpose of assessing the quality of data presented in this Contaminant Delineation Report, EI collected field QC samples for analysis. The primary laboratory, Eurofins Pty Ltd (Eurofins) and secondary laboratory, Envirolab Services Pty Ltd (Envirolab) also prepared and analysed internal QC samples. Details of the field and laboratory QC samples, with the allowable data acceptance ranges are presented in **Table J-1**.

Table J-1 Sampling Data Quality Indicators

QA/QC Measures	Data Quality Indicators
Precision – A quantitative measure of the variability (or reproducibility) of data	Data precision would be assessed by reviewing the performance of blind field duplicate sample sets, through calculation of relative percentage differences (RPD). Data precision would be deemed acceptable if RPDs are found to be less than 30%. RPDs that exceed this range may be considered acceptable where: ▪ Results are less than 10 times the limits of reporting (LOR); ▪ Results are less than 20 times the LOR and the RPD is less than 50%; or ▪ Heterogeneous materials or volatile compounds are encountered.
Accuracy – A quantitative measure of the closeness of reported data to the "true" value	Data accuracy would be assessed through the analysis of: ▪ Method blanks, which are analysed for the analytes targeted in the primary samples; ▪ Matrix spike and matrix spike duplicate sample sets; ▪ Laboratory control samples; and ▪ Calibration of instruments against known standards.
Representativeness – The confidence (expressed qualitatively) that data are representative of each medium present onsite	To ensure the data produced by the laboratory is representative of conditions encountered in the field, the laboratory would carry out the following: ▪ Blank samples will be run in parallel with field samples to confirm there are no unacceptable instances of laboratory artefacts; ▪ Review of relative percentage differences (RPD) values for field and laboratory duplicates to provide an indication that the samples are generally homogeneous, with no unacceptable instances of significant sample matrix heterogeneities; and ▪ The appropriateness of collection methodologies, handling, storage and preservation techniques will be assessed to ensure/confirm there was minimal opportunity for sample interference or degradation (i.e. volatile loss during transport due to incorrect preservation / transport methods).
Completeness – A measure of the amount of useable data from a data collection activity	Analytical data sets acquired during the assessment will be evaluated as complete, upon confirmation that: ▪ Standard operating procedures (SOPs) for sampling protocols were adhered to; and ▪ Copies of all COC documentation are presented, reviewed and found to be properly completed. It can therefore be considered whether the proportion of "useable data" generated in the data collection activities is sufficient for the purposes of the land use assessment.
Comparability – The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Given that a reported data set can comprise several data sets from separate sampling episodes, issues of comparability between data sets are reduced through adherence to SOPs and regulator-endorsed or published guidelines and standards on each data gathering activity. In addition the data will be collected by experienced samplers and NATA-accredited laboratory methodologies will be employed in all laboratory testing programs.

J.1.2 Calculation of Relative Percentage Difference (RPD)

The RPD values were calculated using the following equation:

$$RPD = \frac{|C_O - C_R|}{[(C_O + C_R)/2]} \times 100$$

Where:

C_O = Concentration obtained for the primary sample; and

C_R = Concentration obtained for the blind replicate or split duplicate sample.

J.2 Field QA/QC Data Evaluation

The field quality assurance/quality control (QA/QC) soil samples collected during the investigations were as follows:

1) Blind field duplicates;
2) Inter-laboratory duplicates;
3) Trip blanks;
4) Trip spikes; and
5) Rinsate blanks.

Analytical results for tested soil QA/QC samples, including calculated RPD values between primary and duplicate samples, are presented in **Table T2**, respectively.

J.2.1 Soil Investigation

J.2.1.1 Blind Field Duplicates

Sample TPQD1 was collected as a blind field duplicate (BFD) from the primary sample TP101_0.1-0.2 on 24 July 2019. Sample TPQD2 was collected as a BFD from primary sample TP120_0.1-0.2 on 24 July 2019. The preparation of the BFD samples involved the collection of a bulk quantity of soil from the same sampling point without mixing, before dividing the material into identical sampling vessels. The duplicate samples were then presented blind to the primary laboratory (Eurofins) to avoid any potential analytical bias. BFD soil samples were analysed for TRHs, BTEX, selected heavy metals, and calculated RPD values were found to be within the Data Acceptance Criteria (**Table T2**), with the following exceptions:

- Cadmium (85.71%) for soil investigation sample TP120_0.1-0.2; and
- Lead (53.16%) for soil investigation sample TP120_0.1-0.2.

These results were considered to reflect the non-homogenous nature of the fill material.

J.2.1.2 Inter-Laboratory Duplicate

Sample TPQT1 was collected as an inter-laboratory duplicate (ILD) of the primary sample TP101_0.1-0.2 on 24 July 2019. Sample TPQT2 was collected as an ILD from primary sample TP120_0.1-0.2 on 24 July 2019. The preparation of the ILD samples was identical to the BFD sample, as described above, and were analysed for TRHs, BTEX and selected heavy metals. The calculated RPD values were within the Data Acceptance Criteria, with the following exceptions:

- Chromium (Total) (53.97%) for soil investigation sample TP101_0.1-0.2;

- Chromium (Total) (81.08%) for soil investigation sample TP120_0.1-0.2; and
- Nickel (75.00%) for soil investigation sample TP120_0.1-0.2.

These results can be attributed to material heterogeneity.

Furthermore, soil samples were placed immediately into jars following sampling to reduce the loss of volatiles from samples. Analytical results indicated that the samples collected were representative of the soils present at respective sampling locations.

J.2.1.3 Trip Blank

One trip blank (TPQTB) sample was prepared and analysed by the primary laboratory (Eurofins) for BTEX. Analytical results for this sample were below the laboratory LOR, indicating that satisfactory sample transport and handling conditions were achieved.

J.2.1.4 Trip Spike

One trip spike (TPQTS) sample was submitted to the primary laboratory for BTEX analysis, the results for which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.

J.2.1.5 Rinsate Blank

One rinsate blank (RB) sample TPQR1 was submitted to the primary laboratory for TRHs, BTEX and selected heavy metal analysis, the results for which were reported below laboratory LOR; therefore, it was concluded that decontamination procedures performed during the field works had been effective.

J.3 LABORATORY QA/QC

J.3.1 Laboratory Accreditation

To undertake all analytical testing, EI commissioned Eurofins as the primary laboratory and Envirolab as the secondary laboratory. Eurofins and Envirolab, both established analytical laboratories which operate in accordance with the guidelines set out in ISO/IEC Guide 25 “General requirements for the competence of calibration and testing laboratories”, conducted all respective analyses using National Association Testing Authorities (NATA)-registered procedures.

In relation to contingencies, should the pre-determined DQOs not be achieved, in accordance with each laboratory’s QC policy (**Appendix J**), respective tests would be accordingly repeated. Should the results again fall outside the DQOs, then sample heterogeneity may be assumed and written comment will be provided to this effect on the final laboratory certificate. The laboratory QA/QC reports are included in **Appendix K**.

J.3.2 Sample Holding Times

All sample holding times were within standard environmental protocols as tabulated in **Appendix K**.

J.3.3 Test Methods and Practical Quantitation Limits (PQLs)

Practical Quantitation Limits for all tested parameters during the assessment of soils and groundwater are presented in **Appendix K**.

J.3.4 Method Blanks

Concentrations of all parameters in method blanks during the assessment were below the laboratory PQLs and were therefore within the DAC.

J.3.5 Laboratory Duplicate Samples

The RPD values of Laboratory Duplicate Samples (LDS) for the analysis batches were all within acceptable ranges and conformed to the DAC.

J.3.6 Laboratory Control Samples

The Laboratory Control Samples for the analysis batches were within acceptable ranges and conformed to the DAC.

J.3.7 Matrix Spikes

The matrix spikes of the analysis were within the acceptable ranges and conformed to the DAC, with the following exception:

- Chromium (250%) for sample S19-JI36539;
- Copper (74%) for sample S19-JI36549;
- Lead (74%) for sample S19-JI36549;
- Nickel (74%) for sample S19-JI36549;
- Zinc (66%) for sample S19-JI36549;
- Chromium (27%) for sample S19-JI36559;
- Copper (24%) for sample S19-JI36559;
- Zinc (70%) for sample S19-JI36559;
- Copper (157%) for sample S19-JI36589; and
- Chromium (73%) for sample S19-JI36599.

For all listed samples the matrix spike recovery is was outside of the recommended acceptance criteria. However, an acceptable recovery was obtained for the laboratory control sample. As such, the samples failed due to matrix interference.

J.3.8 Surrogate

Recovery results for all surrogate samples conformed to the DAC.

J.3.9 Concluding Remark

Based on the laboratory QA/QC results EI considers that although a small number of discrepancies were identified, which in most cases could be attributed to the laboratory matrix interference, which was not a reflection of the data. As such, the data generally confirms that the analytical results for the various phases of laboratory testing were valid and useable for interpretation purposes.

Table T2 **Soil RPD Values** **E24306.E03 - Dunmore**

Sample identification	Description	Date	TRH				BTEX				Heavy Metals							
			F1	F2	F3	F4	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
Intra-laboratory Duplicate - Soil Investigation																		
TP101_0.1-0.2	Soil	24/07/2019	< 20	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	4.4	< 0.4	40	40	35	< 0.1	12	70
TPQD1	BFD of TP101_0.1-0.2		< 20	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	4.7	< 0.4	33	36	35	< 0.1	11	67
RPD			*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*6.59*	*0.00*	*19.18*	*10.53*	*0.00*	*0.00*	*8.70*	*4.38*
TP120_0.1-0.2	Soil	24/07/2019	< 20	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	3.8	< 0.4	26	56	29	< 0.1	11	75
TPQD2	BFD of TP120_0.1-0.2		< 20	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	5.4	1	30	85	50	< 0.1	16	110
RPD			*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*34.78*	**85.71**	*14.29*	*41.13*	**53.16**	*0.00*	*37.04*	*37.84*
Inter-laboratory Duplicate - Soil Investigation																		
TP101_0.1-0.2	Soil	24/07/2019	< 20	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	4.4	< 0.4	40	40	35	< 0.1	12	70
TPQT1	BFD of TP101_0.1-0.2		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<4	<0.4	23	38	29	<0.1	9	54
RPD			*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*9.52*	*NA*	**53.97**	*5.13*	*18.75*	*NA*	*28.57*	*25.81*
TP120_0.1-0.2	Soil	24/07/2019	< 20	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	3.8	< 0.4	26	56	29	< 0.1	11	75
TPQT2	BFD of TP120_0.1-0.2		<25	<50	<100	<100	<0.2	<0.5	<1	<3	<4	<0.4	11	38	19	<0.1	5	59
RPD			*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*5.13*	*NA*	**81.08**	*38.30*	*41.67*	*NA*	**75.00**	*23.88*
Rinsate Blanks																		
TPQR1	Equipment Rinsate	24/07/2019	20	<50	<100	<100	<1	<1	<1	<3	<1	<0.2	<1	<1	<1	<0.1	<1	<5
Trip Blanks																		
TPQTB	Soil Trip Blank	Laboratory Prepared	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.3	-	-	-	-	-	-	-	-
Trip Spikes																		
TPQTS	Soil Trip Spike	Laboratory Prepared	-	-	-	-	110%	110%	110%	110%	-	-	-	-	-	-	-	-

NOTE: All results are reported in mg/kg (soil) or µg/L (water)

66.67	RPD calculated by halving detection limit exceeds 30-50% range referenced from AS4482.1 (2005)
52.87	RPD exceeds 30-50% range referenced from AS4482.1 (2005)

F1 = TRH C6-C10 less the sum of BTEX
F2 = TRH >C10-C16 less naphthalene
F3 = TRH >C16-C34
F4 = TRH >C34-C40

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Contamination | Remediation | Geotechnical

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Contamination | Remediation | Geotechnical

Appendix K – Lab QA/QC Policies & DQOs

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

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

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
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NATA # 1261 Site # 20794

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: Jul 31, 2019
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B6	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	TP101_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36539			X		X
2	TP101_0.4-0.5	Jul 24, 2019		Soil	S19-Jl36540			X		X
3	TP102_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36541			X		X
4	TP102_0.3-0.4	Jul 24, 2019		Soil	S19-Jl36542			X		X
5	TP103_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36543			X		X
6	TP103_0.4-0.5	Jul 24, 2019		Soil	S19-Jl36544			X		X
7	TP104_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36545			X		X
8	TP104_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36546			X		X
9	TP105_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36547			X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	TP105_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36548			X		X
11	TP106_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36549			X		X
12	TP106_0.7-0.8	Jul 25, 2019		Soil	S19-Jl36550			X		X
13	TP107_1.0-1.1	Jul 25, 2019		Soil	S19-Jl36551			X		X
14	TP107_1.8-1.9	Jul 25, 2019		Soil	S19-Jl36552			X		X
15	TP108_0.3-0.4	Jul 25, 2019		Soil	S19-Jl36553			X		X
16	TP108_0.5-0.6	Jul 25, 2019		Soil	S19-Jl36554			X		X
17	TP109_0.1-0.2	Jul 25, 2019		Soil	S19-Jl36555			X		X
18	TP109_0.6-0.7	Jul 25, 2019		Soil	S19-Jl36556			X		X
19	TP110_0.2-0.3	Jul 25, 2019		Soil	S19-Jl36557			X		X
20	TP110_0.9-1.0	Jul 25, 2019		Soil	S19-Jl36558			X		X
21	TP111_0.1-0.2	Jul 25, 2019		Soil	S19-Jl36559			X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
22	TP111_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36560			X		X
23	TP112_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36561			X		X
24	TP112_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36562			X		X
25	TP113_0.2-0.3	Jul 24, 2019		Soil	S19-Jl36563			X		X
26	TP113_1.2-1.3	Jul 24, 2019		Soil	S19-Jl36564			X		X
27	TP114_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36585			X		X
28	TP114_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36586			X		X
29	TP115_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36587			X		X
30	TP115_1.1-1.2	Jul 24, 2019		Soil	S19-Jl36588			X		X
31	TP116_0.0-0.1	Jul 24, 2019		Soil	S19-Jl36589			X		X
32	TP116_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36590			X		X
33	TP117_0.3-0.4	Jul 24, 2019		Soil	S19-Jl36591			X		X

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Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
34	TP117_0.8-0.9	Jul 24, 2019		Soil	S19-Jl36592			X		X
35	TP118_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36593			X		X
36	TP118_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36594			X		X
37	TP119_0.2-0.3	Jul 24, 2019		Soil	S19-Jl36595			X		X
38	TP119_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36596			X		X
39	TP120_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36597			X		X
40	TP120_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36598			X		X
41	TPQD1	Jul 24, 2019		Soil	S19-Jl36599			X	X	
42	TPQD2	Jul 24, 2019		Soil	S19-Jl36600			X	X	
43	TPQR1	Jul 24, 2019		Water	S19-Jl36601				X	
44	TPQTS	Jul 24, 2019		Soil	S19-Jl36602		X			
45	TPQTB	Jul 24, 2019		Soil	S19-Jl36603		X			

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Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
46	LAB SPIKE	Jul 24, 2019		Soil	S19-Jl36604		X			
47	TP106_0.0-0.1	Jul 24, 2019		Soil	S19-Jl36618	X				
48	TP107_0.2-0.3	Jul 25, 2019		Soil	S19-Jl36619	X				
49	TP107_1.3-1.4	Jul 25, 2019		Soil	S19-Jl36620	X				
50	TP113_2.5-2.6	Jul 24, 2019		Soil	S19-Jl36621	X				
51	TPQRB	Jul 24, 2019		Water	S19-Jl36622	X				
Test Counts						5	3	42	3	40

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

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

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

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

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

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

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	104			70-130	Pass	
TRH C10-C14	%	116			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	108			70-130	Pass	
Ethylbenzene	%	109			70-130	Pass	
m&p-Xylenes	%	109			70-130	Pass	
Xylenes - Total	%	110			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	93			70-130	Pass	
TRH C6-C10	%	120			70-130	Pass	
TRH >C10-C16	%	107			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	73			70-130	Pass	
Acenaphthylene	%	81			70-130	Pass	
Anthracene	%	91			70-130	Pass	
Benz(a)anthracene	%	87			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	
Benzo(b&j)fluoranthene	%	91			70-130	Pass	
Benzo(g.h.i)perylene	%	85			70-130	Pass	
Benzo(k)fluoranthene	%	102			70-130	Pass	
Chrysene	%	77			70-130	Pass	
Dibenz(a.h)anthracene	%	90			70-130	Pass	
Fluoranthene	%	103			70-130	Pass	
Fluorene	%	76			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	110			70-130	Pass	
Naphthalene	%	77			70-130	Pass	
Phenanthrene	%	99			70-130	Pass	
Pyrene	%	103			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	93			70-130	Pass	
4.4'-DDD	%	99			70-130	Pass	
4.4'-DDE	%	91			70-130	Pass	
4.4'-DDT	%	95			70-130	Pass	
a-BHC	%	92			70-130	Pass	
Aldrin	%	87			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
b-BHC	%	72			70-130	Pass	
d-BHC	%	82			70-130	Pass	
Dieldrin	%	88			70-130	Pass	
Endosulfan I	%	82			70-130	Pass	
Endosulfan II	%	76			70-130	Pass	
Endosulfan sulphate	%	88			70-130	Pass	
Endrin	%	105			70-130	Pass	
Endrin aldehyde	%	84			70-130	Pass	
Endrin ketone	%	87			70-130	Pass	
g-BHC (Lindane)	%	96			70-130	Pass	
Heptachlor	%	104			70-130	Pass	
Heptachlor epoxide	%	92			70-130	Pass	
Hexachlorobenzene	%	98			70-130	Pass	
Methoxychlor	%	79			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	77			70-130	Pass	
Dimethoate	%	82			70-130	Pass	
Ethion	%	100			70-130	Pass	
Fenitrothion	%	83			70-130	Pass	
Methyl parathion	%	84			70-130	Pass	
Mevinphos	%	97			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	111			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	100			80-120	Pass	
Cadmium	%	90			80-120	Pass	
Chromium	%	94			80-120	Pass	
Copper	%	94			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	91			75-125	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	100			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jl36539	CP	%	95			75-125	Pass	
Cadmium	S19-Jl36539	CP	%	83			75-125	Pass	
Chromium	S19-Jl36539	CP	%	250			75-125	Fail	Q08
Copper	S19-Jl36539	CP	%	100			75-125	Pass	
Lead	S19-Jl36539	CP	%	83			75-125	Pass	
Mercury	S19-Jl36539	CP	%	91			70-130	Pass	
Nickel	S19-Jl36539	CP	%	92			75-125	Pass	
Zinc	S19-Jl36539	CP	%	84			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Jl36543	CP	%	104			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Jl36543	CP	%	99			70-130	Pass	
Toluene	S19-Jl36543	CP	%	114			70-130	Pass	
Ethylbenzene	S19-Jl36543	CP	%	120			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	S19-Jl36543	CP	%	122			70-130	Pass	
o-Xylene	S19-Jl36543	CP	%	122			70-130	Pass	
Xylenes - Total	S19-Jl36543	CP	%	122			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Jl36543	CP	%	99			70-130	Pass	
TRH C6-C10	S19-Jl36543	CP	%	122			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M19-Jl27601	NCP	%	91			70-130	Pass	
Dimethoate	M19-Jl27601	NCP	%	90			70-130	Pass	
Ethion	M19-Jl27601	NCP	%	86			70-130	Pass	
Fenitrothion	M19-Jl27601	NCP	%	79			70-130	Pass	
Methyl parathion	M19-Jl27601	NCP	%	73			70-130	Pass	
Mevinphos	M19-Jl27601	NCP	%	78			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S19-Jl36543	CP	%	106			70-130	Pass	
Aroclor-1260	S19-Jl36543	CP	%	119			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S19-Jl36548	CP	%	95			70-130	Pass	
4.4'-DDD	S19-Jl36548	CP	%	101			70-130	Pass	
4.4'-DDE	S19-Jl36548	CP	%	109			70-130	Pass	
4.4'-DDT	S19-Jl36548	CP	%	90			70-130	Pass	
a-BHC	S19-Jl36548	CP	%	97			70-130	Pass	
Aldrin	S19-Jl36548	CP	%	103			70-130	Pass	
b-BHC	S19-Jl36548	CP	%	123			70-130	Pass	
d-BHC	S19-Jl36548	CP	%	100			70-130	Pass	
Dieldrin	S19-Jl36548	CP	%	99			70-130	Pass	
Endosulfan I	S19-Jl36548	CP	%	107			70-130	Pass	
Endosulfan II	S19-Jl36548	CP	%	109			70-130	Pass	
Endosulfan sulphate	S19-Jl36548	CP	%	86			70-130	Pass	
Endrin	S19-Jl36548	CP	%	115			70-130	Pass	
Endrin aldehyde	S19-Jl36548	CP	%	97			70-130	Pass	
Endrin ketone	S19-Jl36548	CP	%	97			70-130	Pass	
Heptachlor	S19-Jl36548	CP	%	85			70-130	Pass	
Heptachlor epoxide	S19-Jl36548	CP	%	109			70-130	Pass	
Hexachlorobenzene	S19-Jl36548	CP	%	106			70-130	Pass	
Methoxychlor	S19-Jl36548	CP	%	100			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jl36549	CP	%	81			75-125	Pass	
Cadmium	S19-Jl36549	CP	%	83			75-125	Pass	
Chromium	S19-Jl36549	CP	%	75			75-125	Pass	
Copper	S19-Jl36549	CP	%	74			75-125	Fail	Q08
Lead	S19-Jl36549	CP	%	74			75-125	Fail	Q08
Mercury	S19-Jl36549	CP	%	85			70-130	Pass	
Nickel	S19-Jl36549	CP	%	74			75-125	Fail	Q08
Zinc	S19-Jl36549	CP	%	66			75-125	Fail	Q08
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-Jl36551	CP	%	80			70-130	Pass	
Acenaphthylene	S19-Jl36551	CP	%	80			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Anthracene	S19-Jl36551	CP	%	77			70-130	Pass	
Benz(a)anthracene	S19-Jl36551	CP	%	89			70-130	Pass	
Benzo(a)pyrene	S19-Jl36551	CP	%	97			70-130	Pass	
Benzo(b&j)fluoranthene	S19-Jl36551	CP	%	86			70-130	Pass	
Benzo(g.h.i)perylene	S19-Jl36551	CP	%	71			70-130	Pass	
Benzo(k)fluoranthene	S19-Jl36551	CP	%	96			70-130	Pass	
Chrysene	S19-Jl36551	CP	%	95			70-130	Pass	
Dibenz(a.h)anthracene	S19-Jl36551	CP	%	89			70-130	Pass	
Fluoranthene	S19-Jl36551	CP	%	80			70-130	Pass	
Fluorene	S19-Jl36551	CP	%	81			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36551	CP	%	79			70-130	Pass	
Naphthalene	S19-Jl36551	CP	%	82			70-130	Pass	
Phenanthrene	S19-Jl36551	CP	%	78			70-130	Pass	
Pyrene	S19-Jl36551	CP	%	81			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Jl36553	CP	%	104			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Jl36553	CP	%	97			70-130	Pass	
Toluene	S19-Jl36553	CP	%	103			70-130	Pass	
Ethylbenzene	S19-Jl36553	CP	%	104			70-130	Pass	
m&p-Xylenes	S19-Jl36553	CP	%	107			70-130	Pass	
o-Xylene	S19-Jl36553	CP	%	108			70-130	Pass	
Xylenes - Total	S19-Jl36553	CP	%	107			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Jl36553	CP	%	114			70-130	Pass	
TRH C6-C10	S19-Jl36553	CP	%	94			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S19-Jl36553	CP	%	102			70-130	Pass	
Aroclor-1260	S19-Jl36553	CP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S19-Jl36555	CP	%	120			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S19-Jl36555	CP	%	111			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S19-Jl36558	CP	%	74			70-130	Pass	
4.4'-DDD	S19-Jl36558	CP	%	116			70-130	Pass	
4.4'-DDE	S19-Jl36558	CP	%	78			70-130	Pass	
4.4'-DDT	S19-Jl36558	CP	%	85			70-130	Pass	
a-BHC	S19-Jl36558	CP	%	98			70-130	Pass	
Aldrin	S19-Jl36558	CP	%	82			70-130	Pass	
b-BHC	S19-Jl36558	CP	%	120			70-130	Pass	
d-BHC	S19-Jl36558	CP	%	78			70-130	Pass	
Dieldrin	S19-Jl36558	CP	%	89			70-130	Pass	
Endosulfan I	S19-Jl36558	CP	%	71			70-130	Pass	
Endosulfan II	S19-Jl36558	CP	%	75			70-130	Pass	
Endosulfan sulphate	S19-Jl36558	CP	%	97			70-130	Pass	
Endrin	S19-Jl36558	CP	%	78			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	S19-Jl36558	CP	%	112			70-130	Pass	
Endrin ketone	S19-Jl36558	CP	%	80			70-130	Pass	
g-BHC (Lindane)	S19-Jl36558	CP	%	124			70-130	Pass	
Heptachlor	S19-Jl36558	CP	%	98			70-130	Pass	
Heptachlor epoxide	S19-Jl36558	CP	%	72			70-130	Pass	
Hexachlorobenzene	S19-Jl36558	CP	%	81			70-130	Pass	
Methoxychlor	S19-Jl36558	CP	%	92			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jl36559	CP	%	85			75-125	Pass	
Cadmium	S19-Jl36559	CP	%	80			75-125	Pass	
Chromium	S19-Jl36559	CP	%	27			75-125	Fail	Q08
Copper	S19-Jl36559	CP	%	24			75-125	Fail	Q08
Lead	S19-Jl36559	CP	%	82			75-125	Pass	
Mercury	S19-Jl36559	CP	%	75			70-130	Pass	
Nickel	S19-Jl36559	CP	%	84			75-125	Pass	
Zinc	S19-Jl36559	CP	%	70			75-125	Fail	Q08
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Jl36563	CP	%	99			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Jl36563	CP	%	91			70-130	Pass	
Toluene	S19-Jl36563	CP	%	94			70-130	Pass	
Ethylbenzene	S19-Jl36563	CP	%	91			70-130	Pass	
m&p-Xylenes	S19-Jl36563	CP	%	93			70-130	Pass	
o-Xylene	S19-Jl36563	CP	%	94			70-130	Pass	
Xylenes - Total	S19-Jl36563	CP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Jl36563	CP	%	103			70-130	Pass	
TRH C6-C10	S19-Jl36563	CP	%	88			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S19-Jl36588	CP	%	117			70-130	Pass	
4.4'-DDD	S19-Jl36588	CP	%	76			70-130	Pass	
4.4'-DDE	S19-Jl36588	CP	%	117			70-130	Pass	
4.4'-DDT	S19-Jl36588	CP	%	78			70-130	Pass	
a-BHC	S19-Jl36588	CP	%	110			70-130	Pass	
Aldrin	S19-Jl36588	CP	%	121			70-130	Pass	
b-BHC	S19-Jl36588	CP	%	90			70-130	Pass	
d-BHC	S19-Jl36588	CP	%	91			70-130	Pass	
Dieldrin	S19-Jl36588	CP	%	104			70-130	Pass	
Endosulfan I	S19-Jl36588	CP	%	103			70-130	Pass	
Endosulfan II	S19-Jl36588	CP	%	104			70-130	Pass	
Endosulfan sulphate	S19-Jl36588	CP	%	83			70-130	Pass	
Endrin	S19-Jl36588	CP	%	101			70-130	Pass	
Endrin aldehyde	S19-Jl36588	CP	%	89			70-130	Pass	
Endrin ketone	S19-Jl36588	CP	%	96			70-130	Pass	
g-BHC (Lindane)	S19-Jl36588	CP	%	123			70-130	Pass	
Heptachlor	S19-Jl36588	CP	%	79			70-130	Pass	
Heptachlor epoxide	S19-Jl36588	CP	%	90			70-130	Pass	
Hexachlorobenzene	S19-Jl36588	CP	%	126			70-130	Pass	
Methoxychlor	S19-Jl36588	CP	%	75			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jl36589	CP	%	92			75-125	Pass	
Cadmium	S19-Jl36589	CP	%	84			75-125	Pass	
Chromium	S19-Jl36589	CP	%	83			75-125	Pass	
Copper	S19-Jl36589	CP	%	157			75-125	Fail	Q08
Lead	S19-Jl36589	CP	%	95			75-125	Pass	
Mercury	S19-Jl36589	CP	%	90			70-130	Pass	
Nickel	S19-Jl36589	CP	%	95			75-125	Pass	
Zinc	S19-Jl36589	CP	%	102			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-Jl36591	CP	%	74			70-130	Pass	
Acenaphthylene	S19-Jl36591	CP	%	75			70-130	Pass	
Anthracene	S19-Jl36591	CP	%	71			70-130	Pass	
Benz(a)anthracene	S19-Jl36591	CP	%	73			70-130	Pass	
Benzo(a)pyrene	S19-Jl36591	CP	%	104			70-130	Pass	
Benzo(b&j)fluoranthene	S19-Jl36591	CP	%	100			70-130	Pass	
Benzo(g.h.i)perylene	S19-Jl36591	CP	%	102			70-130	Pass	
Benzo(k)fluoranthene	S19-Jl36591	CP	%	95			70-130	Pass	
Chrysene	S19-Jl36591	CP	%	75			70-130	Pass	
Dibenz(a.h)anthracene	S19-Jl36591	CP	%	103			70-130	Pass	
Fluoranthene	S19-Jl36591	CP	%	72			70-130	Pass	
Fluorene	S19-Jl36591	CP	%	75			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36591	CP	%	98			70-130	Pass	
Naphthalene	S19-Jl36591	CP	%	75			70-130	Pass	
Phenanthrene	S19-Jl36591	CP	%	73			70-130	Pass	
Pyrene	S19-Jl36591	CP	%	72			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-Jl36593	CP	%	99			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-Jl36593	CP	%	94			70-130	Pass	
Toluene	S19-Jl36593	CP	%	98			70-130	Pass	
Ethylbenzene	S19-Jl36593	CP	%	104			70-130	Pass	
m&p-Xylenes	S19-Jl36593	CP	%	119			70-130	Pass	
o-Xylene	S19-Jl36593	CP	%	96			70-130	Pass	
Xylenes - Total	S19-Jl36593	CP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-Jl36593	CP	%	100			70-130	Pass	
TRH C6-C10	S19-Jl36593	CP	%	101			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S19-Jl36593	CP	%	99			70-130	Pass	
Aroclor-1260	S19-Jl36593	CP	%	112			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-Jl36599	CP	%	87			75-125	Pass	
Cadmium	S19-Jl36599	CP	%	80			75-125	Pass	
Chromium	S19-Jl36599	CP	%	73			75-125	Fail	Q08
Copper	S19-Jl36599	CP	%	103			75-125	Pass	
Lead	S19-Jl36599	CP	%	84			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	S19-Jl36599	CP	%	82			70-130	Pass	
Nickel	S19-Jl36599	CP	%	89			75-125	Pass	
Zinc	S19-Jl36599	CP	%	87			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36539	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36539	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36539	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36539	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Diazinon	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36539	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36539	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36539	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36539	CP	mg/kg	4.4	4.6	6.0	30%	Pass	
Cadmium	S19-Jl36539	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36539	CP	mg/kg	40	43	7.0	30%	Pass	
Copper	S19-Jl36539	CP	mg/kg	40	44	9.0	30%	Pass	
Lead	S19-Jl36539	CP	mg/kg	35	36	5.0	30%	Pass	
Mercury	S19-Jl36539	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36539	CP	mg/kg	12	13	9.0	30%	Pass	
Zinc	S19-Jl36539	CP	mg/kg	70	74	5.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S19-Jl35198	NCP	%	9.6	9.2	4.0	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	M19-Jl31240	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	N19-Jl31226	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36547	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36547	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36547	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36547	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Ethoprop	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36547	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36547	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36547	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36548	CP	mg/kg	3.4	3.0	11	30%	Pass	
Cadmium	S19-Jl36548	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36548	CP	mg/kg	27	25	7.0	30%	Pass	
Copper	S19-Jl36548	CP	mg/kg	48	47	2.0	30%	Pass	
Lead	S19-Jl36548	CP	mg/kg	16	16	4.0	30%	Pass	
Mercury	S19-Jl36548	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36548	CP	mg/kg	11	11	<1	30%	Pass	
Zinc	S19-Jl36548	CP	mg/kg	56	57	2.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36549	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36549	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
a-BHC	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36549	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36549	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36549	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36549	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36549	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36549	CP	mg/kg	5.4	5.6	3.0	30%	Pass	
Cadmium	S19-Jl36549	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36549	CP	mg/kg	18	18	1.0	30%	Pass	
Copper	S19-Jl36549	CP	mg/kg	12	12	2.0	30%	Pass	
Lead	S19-Jl36549	CP	mg/kg	6.4	6.3	1.0	30%	Pass	
Mercury	S19-Jl36549	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36549	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S19-Jl36549	CP	mg/kg	29	30	1.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-Jl36552	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-Jl36552	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-Jl36552	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-Jl36552	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-Jl36552	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-Jl36552	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-Jl36552	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36552	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36552	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan sulphate	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36552	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36552	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36552	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36552	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36552	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S19-Jl36554	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-Jl36554	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-Jl36554	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S19-Jl36554	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-Jl36554	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-Jl36554	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36557	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36557	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36557	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36557	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Ethoprop	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36557	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36557	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36557	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36559	CP	mg/kg	2.5	2.4	5.0	30%	Pass	
Cadmium	S19-Jl36559	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36559	CP	mg/kg	54	54	1.0	30%	Pass	
Copper	S19-Jl36559	CP	mg/kg	97	99	2.0	30%	Pass	
Lead	S19-Jl36559	CP	mg/kg	12	12	<1	30%	Pass	
Mercury	S19-Jl36559	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36559	CP	mg/kg	10	10	<1	30%	Pass	
Zinc	S19-Jl36559	CP	mg/kg	57	58	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-Jl36562	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-Jl36562	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-Jl36562	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-Jl36562	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-Jl36562	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-Jl36562	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-Jl36562	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-Jl36562	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-Jl36562	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Benzo(k)fluoranthene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36587	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36587	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36587	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36587	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Methyl parathion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36587	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36587	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36587	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36588	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S19-Jl36588	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36588	CP	mg/kg	8.9	8.8	<1	30%	Pass	
Copper	S19-Jl36588	CP	mg/kg	120	120	1.0	30%	Pass	
Lead	S19-Jl36588	CP	mg/kg	21	20	9.0	30%	Pass	
Mercury	S19-Jl36588	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36588	CP	mg/kg	9.2	9.1	2.0	30%	Pass	
Zinc	S19-Jl36588	CP	mg/kg	50	50	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36589	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S19-Jl36589	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36589	CP	mg/kg	28	29	4.0	30%	Pass	
Copper	S19-Jl36589	CP	mg/kg	150	150	5.0	30%	Pass	
Lead	S19-Jl36589	CP	mg/kg	7.4	7.8	6.0	30%	Pass	
Mercury	S19-Jl36589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36589	CP	mg/kg	8.3	8.8	6.0	30%	Pass	
Zinc	S19-Jl36589	CP	mg/kg	60	64	5.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36590	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36590	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36590	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36590	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36590	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36590	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36590	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-Jl36592	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-Jl36592	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-Jl36592	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-Jl36592	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-Jl36592	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-Jl36592	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-Jl36592	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36592	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36592	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Heptachlor epoxide	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S19-Jl36592	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	S19-Jl36592	CP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfothion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	S19-Jl36592	CP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	S19-Jl36592	CP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	S19-Jl36592	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g.h.i)perylene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a.h)anthracene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Naphthalene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-Jl36597	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-Jl36597	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-Jl36597	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S19-Jl36597	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S19-Jl36597	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S19-Jl36597	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Pirimiphos-methyl	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S19-Jl36597	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36598	CP	mg/kg	3.0	2.8	8.0	30%	Pass	
Cadmium	S19-Jl36598	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36598	CP	mg/kg	65	81	21	30%	Pass	
Copper	S19-Jl36598	CP	mg/kg	77	100	29	30%	Pass	
Lead	S19-Jl36598	CP	mg/kg	< 5	6.1	38	30%	Fail	
Mercury	S19-Jl36598	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36598	CP	mg/kg	150	160	9.0	30%	Pass	
Zinc	S19-Jl36598	CP	mg/kg	80	90	11	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-Jl36599	CP	mg/kg	4.7	4.7	<1	30%	Pass	
Cadmium	S19-Jl36599	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-Jl36599	CP	mg/kg	33	33	<1	30%	Pass	
Copper	S19-Jl36599	CP	mg/kg	36	36	2.0	30%	Pass	
Lead	S19-Jl36599	CP	mg/kg	35	35	<1	30%	Pass	
Mercury	S19-Jl36599	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-Jl36599	CP	mg/kg	11	11	1.0	30%	Pass	
Zinc	S19-Jl36599	CP	mg/kg	67	67	<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.
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
R20	This sample is a Trip Spike and therefore all results are reported as a percentage

Authorised By

Alena Bounkeua	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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

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

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

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

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: Jul 31, 2019
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B6	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	TP101_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36539			X		X
2	TP101_0.4-0.5	Jul 24, 2019		Soil	S19-Jl36540			X		X
3	TP102_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36541			X		X
4	TP102_0.3-0.4	Jul 24, 2019		Soil	S19-Jl36542			X		X
5	TP103_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36543			X		X
6	TP103_0.4-0.5	Jul 24, 2019		Soil	S19-Jl36544			X		X
7	TP104_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36545			X		X
8	TP104_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36546			X		X
9	TP105_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36547			X		X

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

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

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

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

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

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: Jul 31, 2019
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B6	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
10	TP105_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36548			X		X
11	TP106_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36549			X		X
12	TP106_0.7-0.8	Jul 25, 2019		Soil	S19-Jl36550			X		X
13	TP107_1.0-1.1	Jul 25, 2019		Soil	S19-Jl36551			X		X
14	TP107_1.8-1.9	Jul 25, 2019		Soil	S19-Jl36552			X		X
15	TP108_0.3-0.4	Jul 25, 2019		Soil	S19-Jl36553			X		X
16	TP108_0.5-0.6	Jul 25, 2019		Soil	S19-Jl36554			X		X
17	TP109_0.1-0.2	Jul 25, 2019		Soil	S19-Jl36555			X		X
18	TP109_0.6-0.7	Jul 25, 2019		Soil	S19-Jl36556			X		X
19	TP110_0.2-0.3	Jul 25, 2019		Soil	S19-Jl36557			X		X
20	TP110_0.9-1.0	Jul 25, 2019		Soil	S19-Jl36558			X		X
21	TP111_0.1-0.2	Jul 25, 2019		Soil	S19-Jl36559			X		X

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

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

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
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Site # 23736

Company Name: EI Australia Wollongong
Address: Suite 101, Level 1, 1 Burelli Street
Wollongong
NSW 2500

Project Name: 71 FIG HILL LANE DUNMORE NSW
Project ID: E24306.E03

Order No.:
Report #: 667710
Phone: 0467 639 062
Fax:

Received: Jul 25, 2019 12:55 PM
Due: Jul 31, 2019
Priority: 5 Day
Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B6	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
22	TP111_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36560			X		X
23	TP112_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36561			X		X
24	TP112_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36562			X		X
25	TP113_0.2-0.3	Jul 24, 2019		Soil	S19-Jl36563			X		X
26	TP113_1.2-1.3	Jul 24, 2019		Soil	S19-Jl36564			X		X
27	TP114_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36585			X		X
28	TP114_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36586			X		X
29	TP115_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36587			X		X
30	TP115_1.1-1.2	Jul 24, 2019		Soil	S19-Jl36588			X		X
31	TP116_0.0-0.1	Jul 24, 2019		Soil	S19-Jl36589			X		X
32	TP116_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36590			X		X
33	TP117_0.3-0.4	Jul 24, 2019		Soil	S19-Jl36591			X		X

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Project ID: E24306.E03

Order No.:
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Received: Jul 25, 2019 12:55 PM
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Contact Name: Clare Madigan

Eurofins | mgt Analytical Services Manager : Alena Bounkeua

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins | mgt Suite B6	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X
Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
34	TP117_0.8-0.9	Jul 24, 2019		Soil	S19-Jl36592			X		X
35	TP118_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36593			X		X
36	TP118_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36594			X		X
37	TP119_0.2-0.3	Jul 24, 2019		Soil	S19-Jl36595			X		X
38	TP119_0.5-0.6	Jul 24, 2019		Soil	S19-Jl36596			X		X
39	TP120_0.1-0.2	Jul 24, 2019		Soil	S19-Jl36597			X		X
40	TP120_0.6-0.7	Jul 24, 2019		Soil	S19-Jl36598			X		X
41	TPQD1	Jul 24, 2019		Soil	S19-Jl36599			X	X	
42	TPQD2	Jul 24, 2019		Soil	S19-Jl36600			X	X	
43	TPQR1	Jul 24, 2019		Water	S19-Jl36601				X	
44	TPQTS	Jul 24, 2019		Soil	S19-Jl36602		X			
45	TPQTB	Jul 24, 2019		Soil	S19-Jl36603		X			

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Sydney Laboratory - NATA Site # 18217							X		X	X
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 23736										
46	LAB SPIKE	Jul 24, 2019		Soil	S19-Jl36604		X			
47	TP106_0.0-0.1	Jul 24, 2019		Soil	S19-Jl36618	X				
48	TP107_0.2-0.3	Jul 25, 2019		Soil	S19-Jl36619	X				
49	TP107_1.3-1.4	Jul 25, 2019		Soil	S19-Jl36620	X				
50	TP113_2.5-2.6	Jul 24, 2019		Soil	S19-Jl36621	X				
51	TPQRB	Jul 24, 2019		Water	S19-Jl36622	X				
Test Counts						5	3	42	3	40

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

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

Terms

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	99			70-130	Pass	
TRH C10-C14	%	109			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	86			70-130	Pass	
Toluene	%	95			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
Xylenes - Total	%	93			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	93			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
TRH >C10-C16	%	103			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	107			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper			%	114			80-120	Pass	
Lead			%	98			80-120	Pass	
Mercury			%	97			75-125	Pass	
Nickel			%	110			80-120	Pass	
Zinc			%	94			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M19-Jl35751	NCP	%	93			70-130	Pass	
TRH C10-C14	M19-Jl37027	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	M19-Jl35751	NCP	%	94			70-130	Pass	
TRH >C10-C16	M19-Jl37027	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M19-Jl37582	NCP	%	103			75-125	Pass	
Cadmium	M19-Jl37582	NCP	%	93			75-125	Pass	
Chromium	M19-Jl37582	NCP	%	103			75-125	Pass	
Copper	M19-Jl37582	NCP	%	101			75-125	Pass	
Lead	M19-Jl37582	NCP	%	92			75-125	Pass	
Mercury	M19-Jl37582	NCP	%	98			70-130	Pass	
Nickel	M19-Jl37582	NCP	%	102			75-125	Pass	
Zinc	M19-Jl37582	NCP	%	88			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-Jl36492	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M19-Jl37026	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M19-Jl37026	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M19-Jl37026	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C10	S19-Jl36492	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M19-Jl37026	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M19-Jl37026	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M19-Jl37026	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M19-Jl37582	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M19-Jl37582	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M19-Jl37582	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M19-Jl37582	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M19-Jl37582	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M19-Jl37582	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M19-Jl37582	NCP	mg/L	0.002	0.002	8.0	30%	Pass	
Zinc	M19-Jl37582	NCP	mg/L	< 0.005	< 0.005	<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

Alena Bounkeua	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

eurofins | Environment Testing

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Company Name:	EI Australia Wollongong	**Order No.:**		**Received:**	Aug 2, 2019 4:44 PM
Address:	Suite 101, Level 1, 1 Burelli Street Wollongong NSW 2500	**Report #:** **Phone:** **Fax:**	669304 0467 639 062	**Due:** **Priority:** **Contact Name:**	Aug 5, 2019 1 Day Clare Madigan
Project Name:	ADDITIONAL - 71 FIG HILL LANE DUNMORE NSW				
Project ID:	E24306.E03				

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						pH (1:5 Aqueous extract at 25°C as rec.)	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	TP119_0.5-0.6	Jul 24, 2019		Soil	S19-Au02859	X	X
Test Counts						1	1

Internal Quality Control Review and Glossary

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Units

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

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

QC - Acceptance Criteria

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

Results <10 times the LOR : No Limit

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

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

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

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

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

QC Data General Comments

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

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
pH (1:5 Aqueous extract at 25°C as rec.)	M19-Au03744	NCP	pH Units	8.3	8.3	pass	30%	Pass	

Comments

Sample Integrity

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

Authorised By

Alena Bounkeua	Analytical Services Manager
Julie Kay	Senior Analyst-Inorganic (VIC)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			26/07/2019	[NT]	[NT]	[NT]	[NT]	26/07/2019	[NT]
Date analysed	-			27/07/2019	[NT]	[NT]	[NT]	[NT]	27/07/2019	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	97	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	103	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	117	[NT]	[NT]	[NT]	[NT]	119	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			26/07/2019	[NT]	[NT]	[NT]	[NT]	26/07/2019	[NT]
Date analysed	-			27/07/2019	[NT]	[NT]	[NT]	[NT]	27/07/2019	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-003	81	[NT]	[NT]	[NT]	[NT]	130	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			26/07/2019	[NT]	[NT]	[NT]	[NT]	26/07/2019	[NT]
Date analysed	-			26/07/2019	[NT]	[NT]	[NT]	[NT]	26/07/2019	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	104	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	96	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.